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# Water Resources of North Dakota
## Supplement "B"

of the

## Fourth Biennial Report

of the

# State Water Conservation Commission

and the

## Twenty-First Biennial Report

of the

# State Engineer

of

# North Dakota

From December 1, 1942, to November 1, 1944

*Buy "Dakota Maid" Flour*

TABLE OF CONTENTS


Page

Missouri River, main stem:
- Missouri River near Williston ..... 4
- Missouri River near Sanish ..... 9
- Missouri River near Elbowoods ..... 10
- Missouri River at Bismarck ..... 12

Little Missouri River Basin:
- Little Missouri River at Marmarth ..... 17
- Little Missouri River at Medora ..... 19
- Little Missouri River near Watford City ..... 24
- Little Beaver Creek near Marmarth ..... 27
- Little Muddy River near Williston ..... 29

Knife River Basin:
- Knife River near Broncho ..... 32
- Knife River near Golden Valley ..... 38
- Knife River at Hazen ..... 39

Heart River Basin:
- Heart River near Richardton ..... 43
- Heart River at Glen Ullin ..... 49
- Heart River at Lehigh ..... 50
- Heart River near Mandan ..... 51

Cannonball River Basin:
- Cannonball River near New Leipzig ..... 55
- Cannonball River at Stevenson-Timmer ..... 56
- Cannonball River at Breien ..... 64
- Cedar Creek near Keldron, S. D. ..... 67
- Cedar Creek near Raleigh, N. D. ..... 67

Grand River Basin:
- Grand River at Haley ..... 68

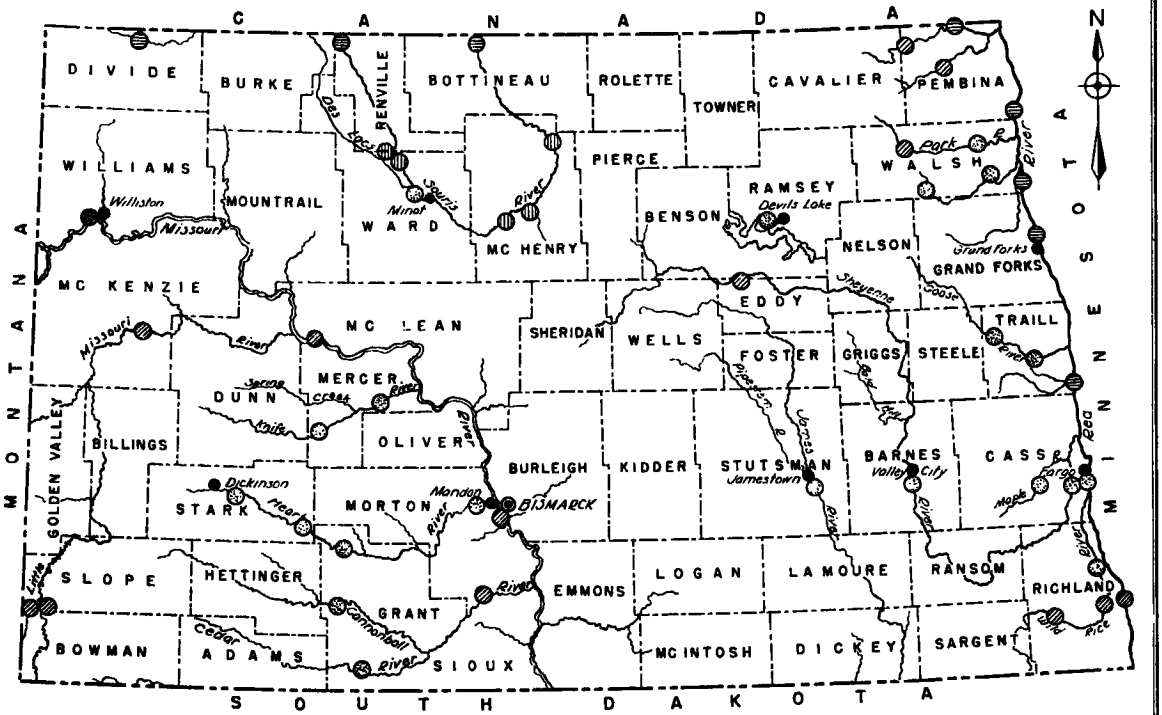
James River Basin:
- James River at Jamestown ..... 72

Boise de Sioux River Basin:
- Bois de Sioux at White Rock, S. D. ..... 75
- Antelope Creek at Dwight, N.D. ..... 76
- Bois de Sioux near Fairmount ..... 77

Red River Basin:
- Red River at Wahpeton ..... 82
- Wild Rice near Abercrombie ..... 83
- Wild Rice at Mantador ..... 87
- Wild Rice at Wild Rice ..... 87
- Red River at Fargo ..... 88
- Sheyenne River at Sheyenne ..... 99
- Sheyenne River at Valley City ..... 102
- Maple River at Mapleton ..... 104
- Sheyenne River at Haggart ..... 105
- Sheyenne River at West Fargo ..... 107
- Red River at Halstad, Minn. ..... 111
- South Fork of Goose River at Portland ..... 113
- Goose River near Portland ..... 114
- Goose River at Hillsboro ..... 116
- Red River at Grand Forks ..... 120
- Red River at Oslo, Minn. ..... 136
- Forest River near Fordville, N. D. ..... 138
- Forest River near Minto ..... 140
- So. Branch Park River near Park River ..... 144
- Park River at Grafton ..... 146
- Red River at Drayton ..... 150
- Tongue River at Cavalier ..... 151
- Tongue River at Pembina ..... 153
- Pembina River near Manitou, Manitoba ..... 154
- Pembina River at Walhalla, N. D. ..... 158
- Pembina River at Neche ..... 160
- Red River at Emerson, Manitoba ..... 170

Souris River Basin:
- Souris River near Sherwood, N. D. ..... 175
- Souris River near Foxholm ..... 179
- Des Lacs River near Foxholm ..... 182
- Souris River above Minot ..... 183
- Souris River near Verendrye ..... 194
- Wintering River near Karlsruhe ..... 197
- Souris River near Towner ..... 200
- Souris River near Bantry ..... 202
- Souris River near Westhope ..... 205

Lakes:
- Lake Darling near Foxholm ..... 210
- Devils Lake near Devils Lake ..... 212




LEGEND

- STATIONS OPERATED BY U.S. GEOLOGICAL SURVEY AND ARMY ENGINEERS.
- STATIONS OPERATED BY U.S. GEOLOGICAL SURVEY AND INTERNATIONAL JOINT COMMISSION.
- STATIONS OPERATED BY U.S. GEOLOGICAL SURVEY AND FISH AND WILDLIFE SERVICE.
- STATIONS OPERATED BY U.S. GEOLOGICAL SURVEY AND N. D. STATE WATER CONSERVATION COMMISSION.

**MAP SHOWING STREAM GAGING STATIONS 1944**

# Stream-Flow Information

Practical and reliable development of water power, irrigation and flood control works must have dependable data on the flow of streams on which to base plans. Otherwise immense sums may be expended only to find by experience that the money has been wasted and the project fails.

The stream-flow information contained in this Supplement "B" of the Biennial Report of the State Water Conservation Commission is the result of years of careful, painstaking recording of the maximum, minimum and average flow by many patriotic citizens of North Dakota, in a cooperative effort directed by the U. S. Geological survey, with the State of North Dakota, through its State Water Conservation Commission and State Engineer.

With the increased use of water for many purposes, the necessity for data relating to the supply of both surface and ground waters becomes urgent, and will continue to increase as time passes and the limits of the possible use of water is approached.

The need of water extends to all people and to most of the principal activities of North Dakota. The available water supply establishes the limit of development. Unfortunately, the available water in any region is not constant. Precipitation is erratic and follows no discoverable law, and varies widely from year to year. There is no fixed relation between the rainfall and the water which flows in the streams, so the records of rainfall alone will not serve as a measure of the supply of water available for use.

The records of the stream flow are used as a guide in making plans for the development of lands by irrigation, for water conservation and water power. The proposed Missouri River diversion is a gigantic project and requires construction to control the flood waters and divert them for use for irrigation and other purposes and is dependent on the records of the stream flow affected. This supplement is a compilation of all of the information so far recorded for North Dakota streams.

## MISSOURI RIVER NEAR WILLISTON, NORTH DAKOTA

Location: Lat. 48° 8′. Long. 103° 44′. Section 31, Township 154 North, Range 101 West, at Lewis and Clark Highway Bridge, 7 miles West of Williston.

Drainage Area: 164,500 square miles.

Records Available: May 1905 to Nov. 1905, June 1906 to May 1907, October 1928 to September 1944.

Extremes: Maximum discharge 231,000 sec. ft. April 4, 1930; Min. discharge 1,300 Sec. ft. Dec. 28, 1939.

| Month | Second Foot Days | Maximum | Minimum | Mean | Runoff in Acre-Feet |
|---|---|---|---|---|---|
| 1905 | | | | | |
| May 23-31 | ..... | 40,800 | 14,800 | 30,200 | 539,000 |
| June | ..... | 83,800 | 38,600 | 68,100 | 4,050,000 |
| July | ..... | 73,300 | 34,500 | 54,900 | 3,380,000 |
| August | ..... | 43,900 | 7,880 | 19,400 | 1,190,000 |
| September | ..... | 7,880 | 6,000 | 7,100 | 422,000 |
| 1905-06 | | | | | |
| October | ..... | 9,830 | 6,400 | 7,700 | 473,000 |
| November | ..... | 8,600 | 7,220 | 8,060 | 480,000 |
| May 26-31 | ..... | 90,200 | 73,300 | 82,800 | 985,000 |
| June | ..... | 155,000 | 61,800 | 93,600 | 5,570,000 |
| July | ..... | 74,400 | 36,600 | 52,700 | 3,240,000 |
| August | ..... | 45,000 | 13,100 | 25,200 | 1,550,000 |
| September | ..... | 25,400 | 10,500 | 15,400 | 916,000 |
| 1906-07 | | | | | |
| October | ..... | 10,200 | 8,340 | 8,840 | 544,000 |
| November 1-24 | ..... | 23,500 | 8,600 | 10,100 | 481,000 |
| March | ..... | 124,000 | 55,400 | 77,900 | 4,790,000 |
| April | ..... | 109,000 | 50,200 | 67,500 | 4,020,000 |
| May 1-22 | ..... | 60,700 | 43,900 | 50,100 | 2,190,000 |
| 1928 | | | | | |
| September 14-30 | ..... | 16,100 | 13,400 | 14,800 | 499,000 |
| 1928-29 | | | | | |
| October | ..... | 17,800 | 13,400 | 14,700 | 904,000 |
| November | ..... | 15,400 | 12,300 | 13,600 | 809,000 |
| December | ..... | 12,300 | 9,080 | 11,600 | 713,000 |
| January | ..... | 13,400 | 5,650 | 9,020 | 555,000 |
| Feburary | ..... | 9,660 | 5,910 | 8,170 | 454,000 |
| March | ..... | 97,300 | 8,380 | 28,500 | 1,750,000 |
| April | ..... | 52,400 | 17,800 | 26,800 | 1,590,000 |
| May | ..... | 92,400 | 19,800 | 38,800 | 2,390,000 |
| June | ..... | 105,000 | 50,600 | 69,000 | 4,110,000 |
| July | ..... | 58,300 | 12,900 | 35,800 | 2,200,000 |
| August | ..... | 13,400 | 8,380 | 11,100 | 682,000 |
| September | ..... | 14,700 | 8,380 | 11,700 | 696,000 |
| Water year 1928-29 | ..... | 105,000 | 5,650 | 23,300 | 16,900,000 |
| 1929-30 | | | | | |
| October | ..... | 15,000 | 12,600 | 13,900 | 855,000 |
| November | ..... | 13,800 | ..... | 11,400 | 678,000 |
| December | ..... | ..... | ..... | 8,870 | 545,000 |
| January | ..... | ..... | ..... | 10,900 | 670,000 |
| February | ..... | ..... | ..... | 18,800 | 1,040,000 |
| March | ..... | ..... | ..... | 21,200 | 1,300,000 |
| April | ..... | 77,800 | 22,700 | 31,900 | 1,900,000 |
| May | ..... | 37,600 | 24,500 | 29,400 | 1,810,000 |
| June | ..... | 49,200 | 26,400 | 36,800 | 2,190,000 |
| July | ..... | 30,400 | 13,000 | 21,100 | 1,300,000 |
| August | ..... | 33,300 | 10,000 | 17,400 | 1,070,000 |
| September | ..... | 15,800 | 10,700 | 12,800 | 762,000 |
| Water year 1929-30 | ..... | 77,800 | ..... | 19,500 | 14,100,000 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1930-31** | | | | | |
| October | ..... | 17,500 | 10,400 | 13,400 | 824,000 |
| November | ..... | 13,000 | 8,560 | 11,400 | 678,000 |
| December | ..... | 14,200 | 5,920 | 10,300 | 633,000 |
| January | ..... | 10,700 | 4,600 | 7,260 | 446,000 |
| February | ..... | 14,200 | 11,100 | 12,900 | 716,000 |
| March | ..... | 20,200 | 8,380 | 12,500 | 769,000 |
| April | ..... | 25,600 | 10,400 | 12,700 | 756,000 |
| May | ..... | 40,000 | 8,560 | 17,800 | 1,090,000 |
| June | ..... | 50,600 | 20,900 | 37,100 | 2,210,000 |
| July | ..... | 19,300 | 3,930 | 10,000 | 615,000 |
| August | ..... | 15,500 | 4,640 | 8,400 | 516,000 |
| September | ..... | 11,100 | 4,340 | 6,120 | 364,000 |
| Water year 1930-31 | ..... | 50,600 | 3,930 | 13,300 | 9,620,000 |
| **1931-32** | | | | | |
| October | ..... | 11,100 | 7,890 | 9,040 | 556,000 |
| November | ..... | 9,170 | 3,800 | 6,900 | 416,000 |
| December | ..... | 7,710 | 3,340 | 5,020 | 309,000 |
| January | ..... | 9,170 | 4,640 | 6,540 | 402,000 |
| February | ..... | 8,980 | 4,340 | 5,630 | 324,000 |
| March | ..... | 18,800 | 7,890 | 10,600 | 652,000 |
| April | ..... | 45,100 | 12,700 | 20,800 | 1,240,000 |
| May | ..... | 67,700 | 22,100 | 37,800 | 2,320,000 |
| June | ..... | 95,600 | 37,600 | 69,100 | 4,110,000 |
| July | ..... | 83,000 | 14,300 | 35,600 | 2,190,000 |
| August | ..... | 17,300 | 10,700 | 13,100 | 806,000 |
| September | ..... | 13,900 | 9,550 | 11,000 | 655,000 |
| Water year 1931-32 | ..... | 95,600 | 3,340 | 19,300 | 14,000,000 |
| **1932-33** | | | | | |
| October | ..... | 13,500 | 9,930 | 11,000 | 676,000 |
| November | ..... | ..... | ..... | 9,140 | 544,000 |
| December | ..... | ..... | ..... | 6,690 | 411,000 |
| January | ..... | ..... | ..... | 7,660 | 471,000 |
| February | ..... | ..... | ..... | 7,100 | 394,000 |
| March | ..... | 44,600 | ..... | 24,800 | 1,520,000 |
| April | ..... | 19,800 | 15,500 | 17,300 | 1,030,000 |
| May | ..... | 58,100 | 20,900 | 34,000 | 2,090,000 |
| June | ..... | 88,100 | 43,500 | 71,400 | 4,250,000 |
| July | ..... | 39,600 | 9,910 | 22,100 | 1,360,000 |
| August | ..... | 30,500 | 7,230 | 10,400 | 640,000 |
| September | ..... | 31,500 | 9,320 | 13,600 | 809,000 |
| Water year 1932-33 | ..... | 88,100 | ..... | 19,600 | 14,200,000 |
| **1933-34** | | | | | |
| October | ..... | 10,300 | 8,590 | 9,343 | 574,500 |
| November | ..... | 26,600 | 5,550 | 12,050 | 717,000 |
| December | ..... | 12,000 | 3,300 | 5,974 | 367,300 |
| January | ..... | 13,500 | 4,200 | 8,877 | 545,900 |
| February | ..... | 20,200 | 12,400 | 15,370 | 853,500 |
| March | ..... | 48,500 | 13,100 | 19,030 | 1,170,000 |
| April | ..... | 24,100 | 15,600 | 19,260 | 1,146,000 |
| May | ..... | 31,700 | 20,800 | 26,040 | 1,601,000 |
| June | ..... | 47,400 | 19,000 | 28,450 | 169,300 |
| July | ..... | 20,200 | 6,150 | 11,000 | 676,100 |
| August | ..... | 10,000 | 4,040 | 6,249 | 384,200 |
| September | ..... | 5,290 | 3,980 | 4,561 | 271,400 |
| Water year 1933-34 | ..... | 48,500 | 3,300 | 13,810 | 10,000,000 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1934-35** | | | | | |
| October | 254,170 | 9,290 | 7,720 | 8,199 | 504,100 |
| November | 256,170 | 9,450 | 7,260 | 8,539 | 508,100 |
| December | 197,760 | 8,420 | 4,200 | 6,379 | 392,300 |
| January | 165,430 | 8,250 | 3,520 | 5,336 | 328,100 |
| February | 244,080 | 9,850 | 5,320 | 8,717 | 484,100 |
| March | 374,450 | 18,100 | 8,420 | 12,080 | 742,700 |
| April | 465,200 | 19,000 | 12,100 | 15,510 | 922,700 |
| May | 564,300 | 33,900 | 13,100 | 18,200 | 1,119,000 |
| June | 1,630,300 | 83,800 | 33,800 | 54,340 | 3,234,000 |
| July | 1,040,300 | 66 000 | 20,000 | 33,560 | 2,063,000 |
| August | 326,680 | 18,500 | 7,750 | 10,540 | 648,000 |
| September | 221,310 | 8,420 | 6,490 | 7,377 | 439,000 |
| Water year 1934-35 | 5,740,150 | 83,800 | 3,520 | 15,730 | 11,390,000 |
| **1935-36** | | | | | |
| October | 253,260 | 9,130 | 6,940 | 8,170 | 502,300 |
| November | 214,650 | 9,850 | 4,100 | 7,155 | 425,800 |
| December | 216,300 | 9,850 | 4,200 | 6,977 | 429,000 |
| January | 174,530 | 6,940 | 4,200 | 5,630 | 346,200 |
| February | 147,730 | 6,940 | 3,800 | 5,094 | 293,000 |
| March | 704,910 | 50,500 | 6,640 | 22,740 | 1,398,000 |
| April | 657,920 | 46,500 | 8,420 | 21,930 | 1,305,000 |
| May | 990,500 | 51,700 | 19,500 | 31,950 | 1,965,000 |
| June | 1,258,900 | 62,500 | 25,000 | 41,960 | 2,497,000 |
| July | 471,480 | 24,800 | 8,650 | 15,210 | 935,200 |
| August | 300,890 | 13,700 | 7,260 | 9,706 | 596,800 |
| September | 215,540 | 7,920 | 6,470 | 7,185 | 427,500 |
| Water year 1935-36 | 5,606,610 | 62,500 | 3,800 | 15,320 | 11,120,000 |
| **1936-37** | | | | | |
| October | 262,400 | 8,850 | 7,400 | 8,465 | 520,500 |
| November | 287,580 | 14,600 | 5,810 | 9,586 | 570,400 |
| December | 192,340 | 9,850 | 2,490 | 6,205 | 381,500 |
| January | 149,320 | 7,420 | 3,420 | 4,817 | 296,200 |
| February | 155,780 | 6,080 | 5,000 | 5,564 | 309,000 |
| March | 376,340 | 17,100 | 5,940 | 12,140 | 746,500 |
| April | 486,200 | 27,200 | 11,300 | 16,210 | 964,400 |
| May | 559,700 | 30,700 | 10,600 | 18,050 | 1,110,000 |
| June | 1,450,000 | 88,300 | 27,000 | 48,330 | 2,876,000 |
| July | 925,400 | 52,900 | 11,800 | 29,850 | 1,836,000 |
| August | 239,430 | 14,300 | 4,570 | 7,724 | 474,900 |
| September | 187,570 | 8,880 | 4,570 | 6,252 | 372,000 |
| Water year 1936-37 | 5,272,060 | 88,300 | 2,490 | 14,440 | 10,460,000 |
| **1937-38** | | | | | |
| October | 346,690 | 19,200 | 8,800 | 11,180 | 687,600 |
| November | 220,930 | 9,140 | 4,980 | 7,364 | 438,200 |
| December | 143,500 | 5,830 | 2,820 | 4,629 | 284,600 |
| January | 205,430 | 8,000 | 5,190 | 6,627 | 407,500 |
| February | 121,670 | 5,300 | 3,160 | 4,345 | 241,300 |
| March | 875,070 | 57,300 | 4,770 | 28,360 | 1,736,000 |
| April | 301,750 | 12,100 | 7,100 | 10,060 | 598,500 |
| May | 512,270 | 34,300 | 8,950 | 16,520 | 1,016,000 |
| June | 1,722,600 | 90,500 | 40,800 | 57,420 | 3,417,000 |
| July | 1,643,600 | 106,000 | 28,100 | 53,020 | 3,260,000 |
| August | 712,400 | 29,200 | 19,300 | 22,980 | 1,413,000 |
| September | 625,300 | 33,500 | 18,300 | 20,840 | 1,240,000 |
| Water year 1937-38 | 7,431,210 | 106,000 | 2,820 | 20,360 | 14,740,000 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1938-39** | | | | | |
| October | 427,190 | 25,100 | 9,030 | 13,780 | 847,300 |
| November | 518,800 | 21,500 | 10,200 | 17,290 | 1,029,000 |
| December | 364,290 | 15,300 | 8,830 | 11,750 | 722,600 |
| January | 325,470 | 13,800 | 7,930 | 10,500 | 645,600 |
| February | 188,710 | 8,520 | 5,240 | 6,740 | 374,300 |
| March | 1,008,310 | 128,000 | 8,520 | 32,530 | 2,000,000 |
| April | 816,300 | 50,900 | 18,100 | 27,210 | 1,619,000 |
| May | 1,024,000 | 42,200 | 18,100 | 33,030 | 2,031,000 |
| June | 1,337,400 | 56,400 | 34,100 | 44,580 | 2,653,000 |
| July | 703,700 | 39,900 | 12,100 | 22,700 | 1,396,000 |
| August | 362,200 | 14,200 | 7,650 | 11,680 | 718,400 |
| September | 220,920 | 8,420 | 6,630 | 7,364 | 438,200 |
| Water year 1938-39 | 7,297,290 | 128,000 | 5,240 | 19,990 | 14,470,000 |
| **1939-40** | | | | | |
| October | 274,110 | 11,000 | 7,650 | 8,842 | 543,700 |
| November | 306,590 | 11,600 | 8,520 | 10,220 | 608,100 |
| December | 205,050 | 9,330 | 1,320 | 6,615 | 406,700 |
| January | 94,310 | 4,450 | 1,760 | 3,042 | 187,100 |
| February | 138,650 | 5,580 | 2,970 | 4,781 | 275,000 |
| March | 238,890 | 11,400 | 4,830 | 7,706 | 473,800 |
| April | 478,350 | 23,800 | 8,520 | 15,940 | 948,800 |
| May | 575,900 | 26,200 | 11,000 | 18,580 | 1,142,000 |
| June | 908,000 | 41,300 | 17,500 | 30,270 | 1,801,000 |
| July | 572,100 | 27,000 | 14,100 | 18,450 | 1,135,000 |
| August | 571,100 | 23,400 | 17,000 | 18,420 | 1,133,000 |
| September | 249,760 | 17,200 | 5,150 | 8,325 | 495,400 |
| Water year 1939-40 | 4,612,810 | 41,300 | 1,320 | 12,600 | 9,150,000 |
| **1940-41** | | | | | |
| October | 385,770 | 30,200 | 8,680 | 12,440 | 765,200 |
| November | 209,530 | 9,850 | 3,800 | 6,984 | 415,600 |
| December | 203,650 | 10,500 | 4,000 | 6,570 | 403,900 |
| January | 143,700 | 6,600 | 3,200 | 4,635 | 285,000 |
| February | 160,250 | 6,300 | 4,850 | 5,723 | 317,900 |
| March | 269,700 | 23,300 | 4,400 | 8,700 | 534,900 |
| April | 539,300 | 25,400 | 15,600 | 17,980 | 1,070,000 |
| May | 668,600 | 39,000 | 16,200 | 21,570 | 1,326,000 |
| June | 927,600 | 40,800 | 22,400 | 30,920 | 1,840,000 |
| July | 597,700 | 29,600 | 16,700 | 19,280 | 1,186,000 |
| August | 642,000 | 30,100 | 18,100 | 20,710 | 1,273,000 |
| September | 602,200 | 42,000 | 12,800 | 20,070 | 1,194,000 |
| Water year 1940-41 | 5,350,000 | 42,000 | 3,200 | 14,660 | 10,610,000 |
| **1941-42** | | | | | |
| October | 486,100 | 26,200 | 12,400 | 15,680 | 964,200 |
| November | 314,600 | 12,400 | 6,700 | 10,490 | 624,000 |
| December | 259,900 | 11,700 | 4,800 | 8,384 | 515,500 |
| January | 173,800 | 8,300 | 2,600 | 5,606 | 344,700 |
| February | 202,600 | 7,800 | 5,600 | 7,236 | 401,900 |
| March | 549,600 | 28,000 | 6,100 | 17,730 | 1,090,000 |
| April | 500,500 | 24,200 | 13,400 | 16,680 | 992,700 |
| May | 748,200 | 54,800 | 13,800 | 24,140 | 1,484,000 |
| June | 1,420,200 | 68,600 | 31,000 | 47,340 | 2,817,000 |
| July | 777,800 | 36,200 | 15,600 | 25,090 | 1,543,000 |
| August | 564,000 | 21,400 | 16,900 | 18,190 | 1,119,000 |
| September | 560,900 | 21,100 | 17,400 | 18,700 | 1,113,000 |
| Water year 1941-42 | 6,558,200 | 68,600 | 2,600 | 17,970 | 13,008,500 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre Feet |
|---|---|---|---|---|---|
| **1942-43** | | | | | |
| October | 584,300 | 21,100 | 17,500 | 18,850 | 1,159,000 |
| November | 421,910 | 21,400 | 4,800 | 14,060 | 836,800 |
| December | 174,800 | 10,400 | 2,400 | 5,639 | 346,700 |
| January | 167,310 | 8,000 | 2,400 | 5,397 | 331,900 |
| February | 433,040 | 70,000 | 2,800 | 15,470 | 858,900 |
| March | 906,700 | 168,000 | 7,500 | 29,250 | 1,798,000 |
| April | 1,045,400 | 131,000 | 21,100 | 34,850 | 2,074,000 |
| May | 650,900 | 28,900 | 17,500 | 21,000 | 1,291,000 |
| June | 1,812,700 | 84,600 | 35,600 | 60,420 | 3,595,000 |
| July | 1,503,500 | 80,600 | 25,500 | 48,500 | 2,982,000 |
| August | 806,600 | 33,500 | 19,700 | 26,020 | 1,600,000 |
| September | 807,900 | 28,400 | 25,900 | 26,930 | 1,602,000 |
| Water year 1942-43 | 9,315,060 | 168,000 | 2,400 | 25,520 | 18,475,300 |
| **1943-1944** | | | | | |
| October | 820,100 | 28,900 | 24,400 | 26,450 | 1,627,000 |
| November | 686,900 | 26,800 | 19,400 | 22,900 | 1,362,000 |
| December | 575,000 | 20,500 | 10,000 | 18,550 | 1,140,000 |
| January | 410,600 | 20,000 | 5,250 | 13,250 | 814,400 |
| February | 278,900 | 17,800 | 6,720 | 9,617 | 553,200 |
| March | 553,300 | 50,000 | 5,200 | 17,850 | 1,097,000 |
| April | 535,400 | 40,000 | 7,230 | 17,850 | 1,062,000 |
| May | 653,710 | 51,900 | 7,640 | 21,090 | 1,297,000 |
| June | 2,118,100 | 117,000 | 30,200 | 70,600 | 4,201,000 |
| July | 1,194,700 | 81,400 | 17,500 | 38,540 | 2,370,000 |
| August | 717,700 | 28,400 | 20,700 | 23,150 | 1,424,000 |
| September | 556,600 | 21,400 | 16,900 | 18,550 | 1,104,000 |
| Water year 1943-44 | 9,101,010 | 117,000 | 5,200 | 24,870 | 18,051,600 |

## MISSOURI RIVER AT SANISH, NORTH DAKOTA

Location: Section 14, Township 152 North, Range 93 West at Highway bridge at Sanish.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1928 | | | | | |
| September 23-30 | 111,700 | 15,400 | 13,500 | 14,000 | 222,000 |
| 1928-29 | | | | | |
| October | 458,600 | 18,300 | 12,900 | 14,800 | 910,000 |
| November | 427,600 | 15,400 | 12,900 | 14,300 | 851,000 |
| December | 329,120 | ..... | ..... | 10,600 | 652,000 |
| January | 284,820 | ..... | ..... | 9,190 | 565,000 |
| February | 211,620 | 9,700 | 5,180 | 7,560 | 420,000 |
| March | 450,620 | 85,800 | 8,820 | 27,200 | 1,670,000 |
| April | 888,300 | 50,900 | 19,900 | 29,600 | 1,760,000 |
| May | 1,309,300 | 84,400 | 28,700 | 42,200 | 2,590,000 |
| June | 2,084,800 | 90,000 | 52,200 | 69,500 | 4,140,000 |
| July | 1,121,400 | 58,700 | 16,800 | 36,200 | 2,230,000 |
| August | 313,360 | 15,400 | 7,620 | 10,100 | 621,000 |
| September | 348,460 | 14,100 | 8,000 | 11,600 | 690,000 |
| Water year 1928-29 | 8,229,000 | ..... | ..... | 23,571 | 17,099,000 |
| 1929-30 | | | | | |
| October | 422,700 | 14,900 | 12,500 | 13,600 | 836,000 |
| November | 350,220 | 14,100 | ..... | 11,700 | 696,000 |
| December | 275,150 | ..... | ..... | 8,880 | 546,000 |
| January | 297,990 | ..... | ..... | 9,610 | 591,000 |
| February | 462,151 | ..... | ..... | 16,500 | 916,000 |
| March | 559,200 | ..... | ..... | 18,000 | 1,110,000 |
| April | 980,100 | 81,000 | 24,000 | 32,700 | 1,950,000 |
| May | 950,500 | 40,100 | 24,700 | 30,700 | 1,890,000 |
| June | 1,171,500 | 50,700 | 26,200 | 39,000 | 2,320,000 |
| July | 733,000 | 34,000 | 13,700 | 23,600 | 1,450,000 |
| August | 540,700 | 32,200 | 10,200 | 17,400 | 1,070,000 |
| September | 417,700 | 17,900 | 11,800 | 13,900 | 827,000 |
| Water year 1929-30 | 7,160,910 | ..... | ..... | 19,600 | 14,200,000 |
| 1930-31 | | | | | |
| October | 460,400 | 21,400 | 11,500 | 14,900 | 916,000 |
| November | 343,310 | 15,900 | 7,100 | 11,400 | 678,000 |
| December | 303,160 | 12,900 | 7,100 | 9,780 | 601,000 |
| January | 214,650 | 9,880 | 4,900 | 6,920 | 425,000 |
| February | 328,700 | 12,900 | 10,500 | 11,700 | 650,000 |
| March | 378,860 | 15,900 | 9,560 | 12,200 | 750,000 |
| April | 386,700 | 41,200 | 10,500 | 12,900 | 768,000 |
| May | 545,840 | 34,000 | 9,560 | 17,600 | 1,080,000 |
| June | 1,103,900 | 47,400 | 19,200 | 36,800 | 2,190,000 |
| July | 343,480 | 22,600 | 5,120 | 11,000 | 676,000 |
| August | 261,110 | 16,000 | 5,120 | 8,420 | 518,000 |
| September | 169,360 | 9,640 | 4,700 | 5,650 | 336,000 |
| Water year 1930-31 | 4,838,470 | 47,400 | 4,700 | 13,300 | 9,590,000 |
| 1931-32 | | | | | |
| October | 277,220 | 10,400 | 8,000 | 9,400 | 550,000 |
| November | 210,490 | 8,930 | 3,250 | 7,020 | 418,000 |
| December | 156,300 | 7,400 | 3,400 | 5,040 | 310,000 |
| January | 205,860 | 9,270 | 5,000 | 6,640 | 408,000 |
| February | 164,150 | 8,000 | 4,400 | 5,660 | 326,000 |
| March | 359,440 | 18,600 | 8,600 | 11,600 | 713,000 |
| April | 720,700 | 50,700 | 15,000 | 24,000 | 1,430,000 |
| May | 1,126,200 | 68,400 | 19,800 | 36,300 | 2,230,000 |
| June | 2,112,200 | 100,000 | 42,300 | 70,400 | 4,190,000 |
| July | 1,163,100 | 84,800 | 15,500 | 37,500 | 2,310,000 |
| August | 419,100 | 18,600 | 10,800 | 13,500 | 830,000 |
| September | 339,370 | 16,500 | 9,270 | 11,300 | 672,000 |
| Water year 1931-32 | 7,254,130 | 100,000 | 3,250 | 19,800 | 14,400,000 |

## MISSOURI RIVER NEAR ELBOWOODS, NORTH DAKOTA

Location: Latitude 47° 34′, Longitude 102° 12′. NE¼NE¼ Section 12, Township 147 N, Range 91 W, at bridge on State Highway No. 8, 2 miles down stream from Little Missouri River. 2½ miles west of Elbowoods.

Drainage Area: 179,800 square miles.

Records Available: October 1939 to September 1944.

Extremes: Maximum discharge 65,000 second-feet April 10, 1941; Min. 1,500 Sec-Ft. Dec. 30, 1919.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1939-40** | | | | | |
| October | 274,900 | 10,800 | 8,120 | 8,868 | 545,300 |
| November | 306,650 | 11,400 | 8,820 | 10,220 | 608,200 |
| December | 220,360 | 9,980 | 1,500 | 7,108 | 437,100 |
| January | 98,900 | 4,200 | 1,700 | 3,190 | 196,200 |
| February | 133,800 | 5,400 | 3,200 | 4,614 | 265,400 |
| March | 209,700 | 10,100 | 4,900 | 6,765 | 415,900 |
| April | 535,500 | 24,900 | 10,300 | 17,850 | 1,062,000 |
| May | 580,400 | 24,900 | 13,700 | 18,720 | 1,151,000 |
| June | 902,100 | 37,800 | 22,400 | 30,070 | 1,789,000 |
| July | 574,400 | 24,100 | 15,200 | 18,530 | 1,139,000 |
| August | 606,300 | 26,800 | 17,700 | 19,560 | 1,203,000 |
| September | 302,160 | 18,500 | 6,000 | 10,070 | 599,300 |
| Water year 1939-40 | 4,745,170 | 37,800 | 1,500 | 12,960 | 9,411,400 |
| **1940-41** | | | | | |
| October | 404,000 | 31,200 | 9,520 | 13,030 | 801,300 |
| November | 205,140 | 9,820 | 2,200 | 6,838 | 406,900 |
| December | 211,400 | 10,000 | 4,400 | 6,819 | 419,300 |
| January | 159,700 | 6,800 | 4,000 | 5,152 | 316,800 |
| February | 161,500 | 6,100 | 5,200 | 5,768 | 320,300 |
| March | 235,000 | 13,000 | 4,900 | 7,581 | 466,100 |
| April | 642,200 | 38,800 | 15,000 | 21,410 | 1,274,000 |
| May | 635,000 | 32,300 | 16,500 | 20,480 | 1,260,000 |
| June | 1,095,800 | 60,300 | 24,900 | 36,530 | 2,173,000 |
| July | 609,200 | 26,500 | 17,200 | 19,650 | 1,208,000 |
| August | 698,300 | 37,600 | 18,600 | 22,530 | 1,385,000 |
| September | 641,100 | 47,000 | 14,400 | 21,370 | 1,272,000 |
| Water year 1940-41 | 5,698,340 | 60,300 | 2,200 | 15,610 | 11,302,000 |
| **1941-42** | | | | | |
| October | 528,300 | 28,300 | 14,000 | 17,040 | 1,048,000 |
| November | 337,550 | 13,900 | 6,000 | 11,250 | 669,500 |
| December | 253,870 | 11,200 | 5,000 | 8,189 | 503,500 |
| January | 167,400 | 8,300 | 2,900 | 5,400 | 332,000 |
| February | 213,500 | 8,500 | 5,700 | 7,625 | 423,500 |
| March | 536,400 | 37,000 | 5,600 | 17,300 | 1,064,000 |
| April | 571,900 | 30,000 | 15,000 | 19,060 | 1,134,000 |
| May | 770,700 | 54,500 | 15,700 | 24,860 | 1,529,000 |
| June | 1,531,600 | 72,800 | 30,400 | 51,050 | 3,038,000 |
| July | 870,600 | 43,000 | 17,200 | 28,080 | 1,727,000 |
| August | 598,800 | 23,100 | 17,800 | 19,320 | 1,188,000 |
| September | 596,100 | 21,800 | 18,900 | 19,870 | 1,182,000 |
| Water year 1941-42 | 6,976,720 | 72,800 | 2,900 | 19,110 | 13,838,500 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre Feet |
|---|---|---|---|---|---|
| **1942-1943** | | | | | |
| October | 608,500 | 21,500 | 18,800 | 19,630 | 1,207,000 |
| November | 454,600 | 22,800 | 6,000 | 15,150 | 901,700 |
| December | 174,100 | 8,000 | 3,800 | 5,616 | 345,300 |
| January | 179,600 | 7,100 | 3,100 | 5,794 | 356,200 |
| February | 419,500 | 70,000 | 3,000 | 14,980 | 832,100 |
| March | 898,500 | 200,000 | 10,000 | 28,900 | 1,782,000 |
| April | 1,457,200 | 224,000 | 23,200 | 48,570 | 2,890,000 |
| May | 681,600 | 28,800 | 16,400 | 21,990 | 1,352,000 |
| June | 1,858,400 | 82,000 | 29,900 | 61,950 | 3,686,000 |
| July | 1,581,900 | 84,000 | 27,200 | 51,030 | 3,138,000 |
| August | 831,300 | 35,800 | 20,700 | 26,820 | 1,649,000 |
| September | 813,600 | 29,100 | 26,400 | 27,120 | 1,614,000 |
| Water year 1942-43 | 9,958,000 | 224,000 | 3,000 | 27,280 | 19,753,300 |
| **1943-1944** | | | | | |
| October | 839,900 | 28,800 | 25,200 | 27,090 | 1,666,000 |
| November | 714,900 | 27,200 | 21,100 | 23,830 | 1,418,000 |
| December | 481,500 | 21,100 | 12,200 | 15,530 | 955,000 |
| January | 385,100 | 18,400 | 7,100 | 12,240 | 763,800 |
| February | 333,700 | 16,400 | 8,000 | 11,510 | 661,900 |
| March | 463,500 | 66,000 | 8,000 | 14,950 | 919,300 |
| April | 1,206,820 | 110,000 | 9,710 | 40,230 | 2,394,000 |
| May | 657,800 | 53,500 | 9,260 | 21,220 | 1,305,000 |
| June | 2,217,000 | 114,000 | 29,000 | 73,900 | 4,397,000 |
| July | 1,280,700 | 84,000 | 20,000 | 41,310 | 2,540,000 |
| August | 755,400 | 30,400 | 21,800 | 24,370 | 1,498,000 |
| September | 592,700 | 22,500 | 18,800 | 19,760 | 1,176,000 |
| Water year 1943-44 | 9,929,020 | 110,000 | 7,100 | 27,130 | 19,690,000 |

## MISSOURI RIVER AT BISMARCK, NORTH DAKOTA

Location: At Memorial Highway Bridge one mile West of Bismarck and about four miles above the Heart River. Latitude 46° 48′ 30″. Longitude 100° 49′ 5″. Section 31, Township 139 North, Range 80 West. Prior to April 10, 1936, water stage recorder was located at Bismarck City Water Plant, 2,000 feet upstream with datum 0.47 feet higher. Zero of gage is 1,618.38 feet above mean sea level.

Drainage Area: 186,400 Square Miles.

Records Available: October 1927 to September 1944.

Extremes: Maximum discharge 273,000 sec. ft. April 3, 1943.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1927-28 | | | | | |
| October | 673,900 | 25,000 | 19,600 | 21,700 | 1,330,000 |
| November 1-14 | 285,000 | 22,200 | 17,300 | 20,400 | 566,000 |
| November 15-30 | ..... | ..... | ..... | ..... | * 500,000 |
| December | ..... | ..... | ..... | ..... | * 500,000 |
| January | ..... | ..... | ..... | ..... | * 600,000 |
| February | ..... | ..... | ..... | ..... | * 800,000 |
| March 1-14 | ..... | ..... | ..... | ..... | *1,500,000 |
| March 15-31 | 2,062,200 | 201,000 | 68,600 | 121,000 | 4,080,000 |
| April | 1,135,400 | 101,000 | 25,900 | 37,800 | 2,250,000 |
| May | 1,952,600 | 107,000 | 26,800 | 63,000 | 3,870,000 |
| June | 2,328,600 | 125,000 | 54,400 | 77,600 | 4,620,000 |
| July | 2,471,400 | 122,000 | 41,800 | 79,700 | 4,900,000 |
| August | 870,600 | 45,400 | 14,600 | 28,100 | 1,730,000 |
| September | 419,600 | 15,900 | 12,800 | 14,000 | 833,000 |
| Water year 1927-28 | ..... | 201,000 | 12,800 | ..... | 28,079,000 |
| * Estimated | | | | | |
| 1928-29 | | | | | |
| October | 455,600 | 18,000 | 12,800 | 14,700 | 904,000 |
| November | 454,300 | 17,600 | 13,000 | 15,110 | 898,000 |
| December | 297,560 | ..... | ..... | 9,600 | 590,000 |
| January | 322,320 | ..... | ..... | 10,400 | 640,000 |
| February | 228,920 | 10,800 | 5,800 | 8,180 | 454,000 |
| March | 543,720 | 77,300 | 9,040 | 17,500 | 1,080,000 |
| April | 1,028,000 | 60,900 | 22,300 | 34,300 | 2,040,000 |
| May | 1,243,100 | 93,900 | 29,500 | 40,100 | 2,470,000 |
| June | 2,194,000 | 105,000 | 51,700 | 73,100 | 4,350,000 |
| July | 1,168,500 | 58,100 | 23,200 | 37,700 | 2,320,000 |
| August | 436,900 | 21,900 | 10,200 | 14,100 | 867,000 |
| September | 334,250 | 13,100 | 9,850 | 11,100 | 660,000 |
| Water Year 1928-29 | 8,707,970 | 105,000 | 5,800 | 23,900 | 17,273,000 |
| 1929-30 | | | | | |
| October | 428,300 | 14,900 | 12,200 | 13,800 | 848,000 |
| November | 376,940 | 13,500 | 7,540 | 12,600 | 750,000 |
| December | 265,080 | 14,400 | 5,720 | 7,920 | 487,000 |
| January | 262,620 | ..... | ..... | 8,770 | 539,000 |
| February | 509,600 | ..... | ..... | 16,000 | 889,000 |
| March | 885,200 | ..... | ..... | 28,600 | 1,760,000 |
| April | 1,072,300 | 72,400 | 24,600 | 35,700 | 2,120,000 |
| May | 995,300 | 40,300 | 25,400 | 31,700 | 1,950,000 |
| June | 1,165,500 | 59,800 | 28,600 | 38,800 | 2,310,000 |
| July | 717,300 | 36,600 | 15,400 | 23,100 | 1,420,000 |
| August | 544,200 | 39,000 | 10,600 | 17,600 | 1,080,000 |
| September | 452,000 | 20,600 | 11,400 | 15,100 | 898,000 |
| Water year 1929-30 | 7,664,300 | 72,400 | 5,720 | 20,800 | 15,100,000 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1930-31** | | | | | |
| October | 411,600 | 19,500 | 11,400 | 13,300 | 818,000 |
| November | 376,350 | 15,400 | 6,970 | 12,500 | 744,000 |
| December | 272,630 | 11,800 | 6,190 | 8,790 | 540,000 |
| January | 207,490 | 7,690 | 5,840 | 6,690 | 411,000 |
| February | 281,820 | 12,600 | 7,690 | 10,100 | 561,000 |
| March | 416,900 | 23,300 | 10,400 | 13,400 | 824,000 |
| April | 393,100 | 26,900 | 11,000 | 13,100 | 780,000 |
| May | 506,300 | 31,500 | 10,400 | 16,300 | 1,000,000 |
| June | 1,035,900 | 45,700 | 15,400 | 34,500 | 2,050,000 |
| July | 390,980 | 23,900 | 6,410 | 12,600 | 775,000 |
| August | 280,600 | 15,300 | 6,200 | 9,050 | 556,000 |
| September | 183,570 | 8,930 | 5,460 | 6,120 | 364,000 |
| Water year 1930-31 | 4,757,240 | 45,700 | 5,460 | 13,000 | 9,420,000 |
| **1931-32** | | | | | |
| October | 291,400 | 10,600 | 8,360 | 9,400 | 578,000 |
| November | 218,170 | 8,930 | 3,820 | 7,270 | 433,000 |
| December | 160,250 | 6,630 | 3,690 | 5,170 | 318,000 |
| January | 201,800 | 8,640 | 4,530 | 6,510 | 400,000 |
| February | 161,190 | 9,560 | 4,380 | 5,560 | 320,000 |
| March | 388,700 | 25,100 | 10,600 | 12,500 | 769,000 |
| April | 837,100 | 79,900 | 15,300 | 27,900 | 1,660,000 |
| May | 1,131,100 | 79,900 | 18,500 | 35,900 | 2,210,000 |
| June | 2,075,100 | 116,000 | 33,300 | 69,200 | 4,120,000 |
| July | 1,345,600 | 101,000 | 19,000 | 43,400 | 2,670,000 |
| August | 426,900 | 18,000 | 11,000 | 13,800 | 848,000 |
| September | 356,580 | 16,600 | 9,880 | 11,900 | 708,000 |
| Water year 1931-32 | 7,593,900 | 116,000 | 3,690 | 20,700 | 15,100,000 |
| **1932-33** | | | | | |
| October | 359,500 | 14,500 | 10,600 | 11,600 | 713,000 |
| November | 278,060 | 14,500 | 7,340 | 9,270 | 552,000 |
| December | 240,880 | 13,600 | 3,820 | 7,770 | 478,000 |
| January | 253,590 | 9,240 | 6,630 | 8,180 | 503,000 |
| February | 211,340 | 8,640 | 5,810 | 7,550 | 419,000 |
| March | 878,880 | 87,500 | 7,840 | 28,400 | 1,750,000 |
| April | 595,900 | 57,000 | 15,100 | 19,900 | 1,180,000 |
| May | 1,215,300 | 79,200 | 18,000 | 39,200 | 2,410,000 |
| June | 2,125,000 | 88,800 | 46,200 | 70,800 | 4,210,000 |
| July | 777,400 | 52,100 | 12,000 | 25,100 | 1,540,000 |
| August | 281,120 | 12,000 | 7,810 | 9,070 | 558,000 |
| September | 479,810 | 38,600 | 9,710 | 16,000 | 952,000 |
| Water year 1932-33 | 7,696,780 | 88,800 | 3,820 | 21,100 | 15,300,000 |
| **1933-34** | | | | | |
| October | 289,630 | 10,300 | 8,590 | 9,343 | 574,500 |
| November | 361,500 | 26,600 | 5,500 | 12,050 | 717,000 |
| December | 185,200 | 12,000 | 3,300 | 5,974 | 367,300 |
| January | 275,200 | 13,500 | 4,200 | 8,877 | 545,900 |
| February | 430,300 | 20,200 | 12,400 | 15,370 | 853,500 |
| March | 590,000 | 48,500 | 13,100 | 19,030 | 1,170,000 |
| April | 577,900 | 24,100 | 15,600 | 19,260 | 1,146,000 |
| May | 807,100 | 31,700 | 20,800 | 26,040 | 1,601,000 |
| June | 853,400 | 47,400 | 19,000 | 28,450 | 1,693,000 |
| July | 340,890 | 20,200 | 6,150 | 11,000 | 676,100 |
| August | 183,720 | 10,000 | 4,040 | 6,249 | 384,200 |
| September | 136,830 | 5,290 | 3,980 | 4,561 | 271,400 |
| Water year 1933-34 | 5,041,670 | 48,500 | 3,300 | 13,810 | 10,000,000 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1934-35** | | | | | |
| October | 233,140 | 8,200 | 5,620 | 7,521 | 462,400 |
| November | 259,730 | 8,900 | 8,240 | 8,658 | 515,200 |
| December | 169,900 | 7,500 | 3,400 | 5,481 | 337,000 |
| January | 155,900 | 6,500 | 4,000 | 5,029 | 309,200 |
| February | 230,600 | 9,900 | 5,800 | 8,236 | 457,400 |
| March | 321,900 | 14,900 | 8,500 | 10,380 | 638,500 |
| April | 523,400 | 29,000 | 10,900 | 17,450 | 1,038,000 |
| May | 520,700 | 34,100 | 13,600 | 16,800 | 1,033,000 |
| June | 1,614,100 | 82,600 | 32,200 | 53,800 | 3,202,000 |
| July | 1,215,300 | 104,000 | 21,000 | 39,200 | 2,411,000 |
| August | 371,550 | 23,000 | 8,340 | 11,990 | 737,000 |
| September | 236,280 | 9,250 | 7,140 | 7,876 | 468,700 |
| Water year 1934-35 | 5,852,500 | 104,000 | 3,400 | 16,030 | 11,609,000 |
| **1935-36** | | | | | |
| October | 246,090 | 8,730 | 7,410 | 7,938 | 488,100 |
| November | 191,400 | 9,800 | 4,100 | 6,380 | 379,600 |
| December | 258,200 | 10,300 | 5,800 | 8,329 | 512,100 |
| January | 176,100 | 7,000 | 4,800 | 5,681 | 349,300 |
| February | 182,000 | 7,900 | 5,200 | 6,276 | 361,000 |
| March | 680 200 | 68,500 | 7,100 | 21,940 | 1,349,000 |
| April | 705,800 | 95,200 | 8,500 | 23,530 | 1,400,000 |
| May | 943,400 | 55,000 | 18,100 | 30,430 | 1,871,000 |
| June | 1,214,500 | 61,400 | 30,100 | 40,480 | 2,409,000 |
| July | 528,000 | 28,900 | 10,300 | 17,030 | 1,047,000 |
| August | 303,990 | 12,300 | 8,280 | 9,806 | 603,000 |
| September | 226,920 | 9,130 | 6,920 | 7,564 | 450,100 |
| Water year 1935-36 | 5,656,600 | 95,200 | 4,100 | 15,460 | 11,220,000 |
| **1936-37** | | | | | |
| October | 257,420 | 9,400 | 7,250 | 8,304 | 510,600 |
| November | 306,500 | 18,000 | 8,200 | 10,220 | 607,900 |
| December | 163,000 | 9,700 | 3,100 | 5,258 | 323,300 |
| January | 186,850 | 10,500 | 4,100 | 6,027 | 370,600 |
| February | 151,700 | 5,700 | 5,200 | 5,418 | 300,900 |
| March | 378,400 | 21,700 | 5,400 | 12,210 | 750,500 |
| April | 573,700 | 42,000 | 14,200 | 19,120 | 1,138,000 |
| May | 518,500 | 29,700 | 11,700 | 16,730 | 1,028,000 |
| June | 1,446,500 | 94,500 | 23,400 | 48,220 | 2,869,000 |
| July | 1,031,100 | 72,200 | 16,200 | 33,260 | 2,045,000 |
| August | 295,910 | 15,200 | 5,080 | 9,545 | 586,900 |
| September | 186,800 | 7,810 | 4,750 | 6,227 | 370,500 |
| Water year 1936-37 | 5,496,380 | 94,500 | 3,100 | 15,060 | 10,900,000 |
| **1937-38** | | | | | |
| October | 326,850 | 15,300 | 6,290 | 10,540 | 648,300 |
| November | 224,110 | 9,430 | 4,800 | 7,470 | 444,500 |
| December | 139,080 | 4,720 | 4,400 | 4,486 | 275,900 |
| January | 196,150 | 7,350 | 4,700 | 6,327 | 389,100 |
| February | 118,750 | 6,200 | 3,500 | 4,241 | 235,500 |
| March | 969,000 | 148,000 | 4,100 | 31,260 | 1,922,000 |
| April | 336,900 | 20,200 | 9,100 | 11,230 | 668,200 |
| May | 478,900 | 28,800 | 10,900 | 15,450 | 949,900 |
| June | 1,634,100 | 85,500 | 21,800 | 54,470 | 3,241,000 |
| July | 1,798,600 | 111,000 | 30,600 | 58,020 | 3,567,000 |
| August | 741,900 | 32,600 | 19,400 | 23,930 | 1,472,000 |
| September | 614,200 | 28,600 | 18,900 | 20,470 | 1,218,000 |
| Water year 1937-38 | 7,578,540 | 148,000 | 3,500 | 20,760 | 15,030,000 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1938-39** | | | | | |
| October | 467,490 | 23,100 | 9,710 | 15,080 | 927,300 |
| November | 458,700 | 21,000 | 9,100 | 15,290 | 909,800 |
| December | 328,600 | 12,700 | 9,300 | 10,600 | 651,800 |
| January | 334,700 | 12,100 | 9,500 | 10,800 | 663,900 |
| February | 199,300 | 9,100 | 5,700 | 7,118 | 395,300 |
| March | 1,115,500 | 212,000 | 7,800 | 35,980 | 2,213,000 |
| April | 961,600 | 73,900 | 18,400 | 32,050 | 1,907,000 |
| May | 979,100 | 44,600 | 18,400 | 31,580 | 1,942,000 |
| June | 1,415,200 | 67,000 | 37,600 | 47,170 | 2,807,000 |
| July | 837,200 | 47,900 | 14,800 | 27,010 | 1,661,000 |
| August | 395,700 | 15,100 | 10,000 | 12,760 | 784,900 |
| September | 235,000 | 9,400 | 7,120 | 7,833 | 466,100 |
| Water year 1938-39 | 7,728,090 | 212,000 | 5,700 | 21,170 | 15,330,000 |
| **1939-40** | | | | | |
| October | 274,460 | 9,480 | 8,040 | 8,854 | 544,400 |
| November | 306,360 | 11,000 | 9,280 | 10,210 | 607,700 |
| December | 234,080 | 10,000 | 2,100 | 7,551 | 464,300 |
| January | 104,300 | 4,400 | 1,800 | 3,365 | 206,900 |
| February | 133,700 | 5,200 | 3,600 | 4,610 | 265,200 |
| March | 192,500 | 9,500 | 5,100 | 6,210 | 381,800 |
| April | 530,500 | 32,200 | 10,000 | 17,680 | 1,052,000 |
| May | 571,300 | 22,800 | 14,200 | 18,430 | 1,133,000 |
| June | 912,700 | 49,900 | 17,600 | 30,420 | 1,810,000 |
| July | 574,800 | 23,000 | 15,200 | 18,540 | 1,140,000 |
| August | 611,800 | 28,100 | 17,600 | 19,740 | 1,213,000 |
| September | 324,420 | 18,000 | 6,040 | 10,810 | 643,500 |
| Water year 1939-40 | 4,770,920 | 49,900 | 1,800 | 13,040 | 9,462,000 |
| **1940-41** | ---------- | ---------- | ---------- | ---------- | ---------- |
| October | 401,800 | 27,600 | 8,700 | 12,960 | 797,000 |
| November | 192,600 | 10,900 | 3 200 | 6,420 | 382,000 |
| December | 227,800 | 8,900 | 4,900 | 7,348 | 451,800 |
| January | 163,100 | 6,500 | 4,000 | 5,261 | 323,500 |
| February | 163,300 | 6,300 | 5,300 | 5,832 | 323,900 |
| March | 233,100 | 12,000 | 5,100 | 7,519 | 462,300 |
| April | 648,700 | 41,600 | 16,000 | 21,620 | 1,287,000 |
| May | 621,300 | 31 800 | 16,700 | 20,040 | 1,232,000 |
| June | 1,115,200 | 49,400 | 25,000 | 37,170 | 2,212,000 |
| July | 625,600 | 30,600 | 17,200 | 20,180 | 1,241,000 |
| August | 669,600 | 33,200 | 18,700 | 21,600 | 1,328,000 |
| September | 666,900 | 47,300 | 14,700 | 22,230 | 1,323,000 |
| Water year 1940-41 | 5,729,000 | 49,400 | 3,200 | 15,700 | 11,360,000 |
| **1941-42** | | | | | |
| October | 540,400 | 26,500 | 14,200 | 17,430 | 1,072,000 |
| November | 343,500 | 14,000 | 6,400 | 11,450 | 681,300 |
| December | 235,500 | 10,700 | 4,700 | 7,597 | 467,100 |
| January | 168,400 | 8,800 | 3,000 | 5,432 | 334,000 |
| February | 224,200 | 8,700 | 6,700 | 8,007 | 444,700 |
| March | 509,900 | 43,800 | 5,700 | 16,450 | 1,011,000 |
| April | 599,600 | 65,200 | 12,000 | 19,990 | 1,189,000 |
| May | 750,600 | 53,000 | 15,600 | 24,210 | 1,489,000 |
| June | 1,586,900 | 76,000 | 32,000 | 52,900 | 3,148,000 |
| July | 901,900 | 41,400 | 16,700 | 29,090 | 1,789,000 |
| August | 586,100 | 21,400 | 17,000 | 18,910 | 1,163,000 |
| September | 584,500 | 22,300 | 17,800 | 19,480 | 1,159,000 |
| Water year 1941-42 | 7,031,500 | 76,000 | 3,000 | 19,260 | 13,947,100 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1942-43 | | | | | |
| October | 609,500 | 20,500 | 18,900 | 19,660 | 1,209,000 |
| November | 485,800 | 22,600 | 6,900 | 16,190 | 963,600 |
| December | 171,300 | 8,600 | 3,900 | 5,526 | 339,800 |
| January | 184,300 | 8,200 | 4,300 | 5,945 | 365,600 |
| February | 237,800 | 40,000 | 3,600 | 8,493 | 471,700 |
| March | 847,100 | 108,000 | 13,500 | 27,330 | 1,680,000 |
| April | 1,864,200 | 273,000 | 21,700 | 62,140 | 3,698,000 |
| May | 686,800 | 25,600 | 19,100 | 22,150 | 1,362,000 |
| June | 1,787,900 | 88,500 | 22,200 | 59,600 | 3,546,000 |
| July | 1,666,900 | 84,900 | 27,800 | 53,770 | 3,306,000 |
| August | 830,800 | 34,100 | 21,700 | 26,800 | 1,648,000 |
| September | 835,900 | 32,500 | 26,600 | 27,860 | 1,658,000 |
| Water year 1942-43 | 10,208,300 | 273,000 | 3,600 | 27,970 | 20,247,700 |
| 1943-44 | | | | | |
| October | 868,300 | 29,500 | 25,300 | 28,010 | 1,722,000 |
| November | 738,600 | 28,900 | 21,500 | 24,620 | 1,465,000 |
| December | 486,400 | 20,700 | 11,200 | 15,690 | 964,800 |
| January | 437,300 | 20,000 | 9,600 | 14,110 | 867,400 |
| February | 381,200 | 18,300 | 9,400 | 13,140 | 756,100 |
| March | 460,800 | 66,000 | 8,800 | 14,860 | 914,000 |
| April | 1,245,600 | 120,000 | 10,400 | 41,520 | 2,471,000 |
| May | 624,220 | 52,700 | 9,090 | 20,140 | 1,238,000 |
| June | 2,175,600 | 114,000 | 30,000 | 72,520 | 4,315,000 |
| July | 1,357,500 | 84,200 | 21,100 | 43,790 | 2,693,000 |
| August | 788,200 | 29,200 | 23,100 | 25,430 | 1,563,000 |
| September | 606,800 | 23,900 | 18,600 | 20,230 | 1,204,000 |
| Water year 1943-44 | 10,170,520 | 120,000 | 8,800 | 27,790 | 20,170,000 |

## LITTLE MISSOURI RIVER AT MARMARTH, NORTH DAKOTA

Location: Lat. 46°14′, long. 103°54′, in SE¼ Sec. 30, T, 133 N., R. 105 W. at highway bridge in Marmarth, 1½ miles downstream from Little Beaver Creek.

Drainage Area: 4,724 square miles.

Records available: March 1938 to September 1941—October 1943 to September 1944.

Extremes: Maximum discharge recorded 21,600 second-feet April 5, 1944; no flow at times.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1937-38 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 27-31 | 304 | ..... | ..... | 60.8 | 603 |
| April | 1,153 | 105 | 19 | 38.4 | 2,290 |
| May | 3,745 | 724 | 25 | 121 | 7,430 |
| June | 11,915 | 1,990 | 31 | 397 | 23,630 |
| July | 9,075 | 1,250 | 17 | 293 | 18,000 |
| August | 866 | 121 | 4 | 27.9 | 1,720 |
| September | 5,907 | 780 | 5 | 197 | 11,720 |
| Water year 1937-38 | 32,965 | ..... | ..... | ..... | 65,393 |
| 1938-39 | | | | | |
| October | 238.8 | 18 | 2.8 | 7.70 | 474 |
| November | 155.2 | 11 | 2.0 | 5.17 | 308 |
| December | 120.0 | 12 | 0 | 3.87 | 238 |
| January | 0 | 0 | 0 | 0 | 0 |
| February | 0 | 0 | 0 | 0 | 0 |
| March | 47,461.5 | 6,120 | 0 | 1,531 | 94,140 |
| April | 4,705 | 600 | 45 | 157 | 9,330 |
| May | 1,244 | 233 | 10 | 40.1 | 2,470 |
| June | 14,426 | 1,560 | 54 | 481 | 28,610 |
| July | 20,970 | 7,200 | 23 | 676 | 41,590 |
| August | 1,403 | 150 | 16 | 45.3 | 2,780 |
| September | 211.2 | 34 | 2.6 | 7.04 | 419 |
| Water year 1938-39 | 90,934.7 | 7,200 | 0 | 249 | 180,359 |
| 1939-40 | | | | | |
| October | 394.0 | 35 | 2.6 | 12.7 | 781 |
| November | 387.2 | 23 | 8.2 | 12.9 | 768 |
| December | 343 | 18 | ..... | 11.1 | 680 |
| January | 0 | 0 | 0 | 0 | 0 |
| February | 16 | 0 | 0 | .6 | 32 |
| March | 11,935 | 1,500 | 25 | 385 | 23,670 |
| April | 12,193 | 1,500 | 158 | 406 | 24,180 |
| May | 2,352 | 1,300 | 12 | 237 | 14,580 |
| June | 8,292 | 1,160 | 15 | 276 | 16,450 |
| July | 14,922.4 | 5,830 | 7.0 | 481 | 29,600 |
| August | 8,202 | 1,160 | 14 | 265 | 16,270 |
| September | 2,452.0 | 1,110 | 2.1 | 81.7 | 4,860 |
| Water year 1939-40 | 66,488.6 | 5,830 | 0 | 182 | 131,871 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1940-41** | | | | | |
| October | 3,931 | 600 | 11 | 127 | 7,800 |
| November | 105.0 | 13 | ..... | 3.50 | 208 |
| December | 15.5 | ..... | ..... | .5 | 31 |
| January | 0 | 0 | 0 | 0 | 0 |
| February | 430 | ..... | ..... | 15.4 | 853 |
| March | 11,520 | 1,200 | ..... | 372 | 22,850 |
| April | 17,876 | 2,870 | 114 | 596 | 35,460 |
| May | 3,658 | 448 | 11 | 118 | 7,260 |
| June | 80,431 | 9,320 | 265 | 2,681 | 159,500 |
| July | 2,551 | 309 | 18 | 82.3 | 5,060 |
| August | 4,300 | 675 | 21 | 139 | 8,530 |
| September | 15,791 | 1,520 | 49 | 526 | 31,320 |
| Water year 1940-41 | 140,608.5 | 9,320 | 0 | 385 | 278,872 |
| **1943-44** | | | | | |
| October | 341.6 | 22 | 5.8 | 11 | 678 |
| November | 839 | 35 | 20 | 28 | 1,660 |
| December | 295.5 | 31 | ..... | 9.53 | 586 |
| January | 3.1 | ..... | ..... | .1 | 6.1 |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 3,945 | 2,750 | ..... | 127 | 7,820 |
| April | 151,579 | 21,600 | 228 | 5,053 | 300,700 |
| May | 19,377 | 3,570 | 140 | 625 | 38,430 |
| June | 139,143 | 13,100 | 134 | 4,638 | 276,000 |
| July | 12,070 | 1,150 | 118 | 389 | 23,940 |
| August | 2,617 | 187 | 41 | 84.4 | 5,190 |
| September | 1,191 | 111 | 24 | 39.7 | 2,360 |
| Water year 1943-44 | 331,401.2 | 21,600 | 0 | 905 | 657,400 |

## LITTLE MISSOURI AT MEDORA, NORTH DAKOTA

Location: NE¼ of Section 27, Township 140, Range 102 West, at Highway bridge 200 feet below Northern Pacific Railway bridge at Medora, Billings County.

Drainage Area: 6,190 square miles.

Records Available: May 1903 to September 1908, October 1921 to September 1926, October 1928 to September 1934.

Maximum discharge 37,800 second feet June 7, 1929.

| Month | Second Foot Days | Maximum | Minimum | Mean | Runoff in Acre-Feet |
|---|---|---|---|---|---|
| 1902-03 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | ..... | ..... | ..... | ..... |
| May 12-31 | ..... | 2,880 | 39 | 952 | 37,765 |
| June | ..... | 830 | 54 | 237 | 14,102 |
| July | ..... | 3,900 | 122 | 1,083 | 66,591 |
| August | ..... | 6,100 | 500 | 2,295 | 141,114 |
| September | ..... | 5,550 | 176 | 1,242 | 73,904 |
| Water year 1902-03 | ..... | 6,100 | 39 | ..... | 333,476 |
| 1903-04 | | | | | |
| October | ..... | 147 | 43 | 68 | 4,181 |
| November | ..... | 101 | 61 | 76 | 2,563 |
| December | ..... | ..... | ..... | ..... | 3,100 |
| January | ..... | ..... | ..... | ..... | 2,500 |
| February | ..... | ..... | ..... | ..... | 2,300 |
| March | ..... | 2,480 | 452 | 986 | 37,160 |
| April | ..... | 2,480 | 64 | 797 | 47,420 |
| May | ..... | 352 | 86 | 180 | 11,070 |
| June | ..... | 6,042 | 110 | 1,193 | 70,990 |
| July | ..... | 352 | 27 | 103 | 6,333 |
| August | ..... | 15 | 4 | 10.1 | 621 |
| September | ..... | 307 | 4 | 80.3 | 4,778 |
| Water year 1903-04 | ..... | 6,042 | 4 | ..... | 193,016 |

Note: Partially Estimated.

| Month | Second Foot Days | Maximum | Minimum | Mean | Runoff in Acre-Feet |
|---|---|---|---|---|---|
| 1904-05 | | | | | |
| October | ..... | 86 | 2 | 33.1 | 2,035 |
| November | ..... | 27 | 10 | 13.7 | 706 |
| December | ..... | ..... | ..... | ..... | 1,000 |
| January | ..... | ..... | ..... | ..... | 462 |
| February | ..... | ..... | ..... | ..... | 2,760 |
| March | ..... | 2,220 | 29 | 467 | 28,720 |
| April | ..... | 29 | 2.7 | 8.1 | 483 |
| May | ..... | 187 | 2.7 | 60.5 | 3,720 |
| June | ..... | 4,620 | 9.8 | 2,016 | 120,000 |
| July | ..... | 5,580 | 470 | 2,696 | 165,800 |
| August | ..... | 3,905 | 85 | 781 | 48,020 |
| September | ..... | 1,280 | 1.9 | 235 | 13,980 |
| Water year 1904-05 | ..... | 5,580 | 1.9 | ..... | 388,486 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre Feet |
|---|---|---|---|---|---|
| **1905-06** | | | | | |
| October | ..... | 720 | 29 | 271 | 16,660 |
| November 1-28 | ..... | 770 | 54 | 236 | 13,110 |
| December | ..... | ..... | ..... | ..... | 9,200 |
| January | ..... | ..... | ..... | ..... | 4,000 |
| February | ..... | ..... | ..... | ..... | 3,300 |
| March 23-31 | ..... | 7,200 | 503 | 2,150 | 38,400 |
| April | ..... | 3,890 | 152 | 894 | 53,200 |
| May | ..... | 4,210 | 260 | 1,010 | 62,100 |
| June | ..... | 10,600 | 377 | 2,000 | 119,000 |
| July | ..... | 377 | 85 | 181 | 11,100 |
| August | ..... | 4,370 | 85 | 867 | 53,300 |
| September | ..... | 1,560 | 69 | 449 | 26,700 |
| Water year 1905-06 | ..... | 10,600 | 29 | ..... | 410,070 |
| **1906-07** | | | | | |
| October | ..... | 69 | 15 | 26.3 | 1,620 |
| November 1-17 | ..... | 54 | 29 | 52.5 | 1,770 |
| December | ..... | ..... | ..... | ..... | 3,100 |
| January | ..... | ..... | ..... | ..... | 2,500 |
| February 17-28 | ..... | 6,010 | 688 | 2,890 | 68,800 |
| March | ..... | 1,060 | 260 | 671 | 41,300 |
| April | ..... | 260 | 54 | 143 | 8,450 |
| May | ..... | 15,500 | 29 | 2,500 | 154,000 |
| June | ..... | 19,000 | 970 | 4,160 | 248,000 |
| July | ..... | 6,460 | 820 | 1,820 | 112,000 |
| August | ..... | 1,050 | 44 | 290 | 17,800 |
| September | ..... | 680 | 24 | 115 | 6,840 |
| Water year 1906-07 | ..... | 19,000 | 24 | ..... | 666,180 |
| **1907-08** | | | | | |
| October | ..... | 80 | 8 | 29.5 | 1,810 |
| November | ..... | 8 | 8 | 8 | 476 |
| December 1-14 | ..... | 8 | 4 | 4.3 | 119 |
| January | ..... | ..... | ..... | ..... | 200 |
| February | ..... | ..... | ..... | ..... | 3,000 |
| March 14-31 | ..... | 2,270 | 210 | 936 | 33,400 |
| April | ..... | 1,130 | 14 | 383 | 22,800 |
| May | ..... | 4,160 | 80 | 1,280 | 78,700 |
| June | ..... | 10,200 | 615 | 3,320 | 198,000 |
| July | ..... | 1,700 | 77 | 473 | 29,100 |
| August | ..... | 640 | 34 | 94.5 | 5,810 |
| September | ..... | 243 | 16 | 58.9 | 3,390 |
| Water year 1907-08 | ..... | 10,200 | 4 | ..... | 376,805 |

Note: Water year 1908-1909—18,100. Discontinued until 1921.

| | | | | | |
|---|---|---|---|---|---|
| **1921-22** | | | | | |
| October 11-31 | ..... | 12 | 9 | 10.1 | 421 |
| November 1-21 | ..... | 12 | 10 | 11.1 | 462 |
| December | ..... | ..... | ..... | ..... | 675 |
| January | ..... | ..... | ..... | ..... | 1,982 |
| February | ..... | ..... | ..... | ..... | 41,000 |
| March 12-31 | ..... | 3,000 | 55 | 1,070 | 42,400 |
| April | ..... | 2,200 | 395 | 1,180 | 70,200 |
| May | ..... | 4,000 | 440 | 1,490 | 91,600 |
| June 1-17 | ..... | 7,840 | 605 | 2,660 | 89,700 |
| July | ..... | ..... | ..... | ..... | 27,000 |
| August | ..... | ..... | ..... | ..... | 12,800 |
| September | ..... | ..... | ..... | ..... | 2,080 |
| Water year 1921-22 | ..... | 7,840 | 9 | ..... | 380,320 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1922-23** | | | | | |
| October | ..... | ..... | ..... | ..... | 6,150 |
| November 6-30 | ..... | 665 | 150 | 342 | 17,000 |
| December | ..... | 440 | 15 | 86.3 | 5,310 |
| January | ..... | ..... | ..... | ..... | 5,530 |
| February | ..... | ..... | ..... | ..... | 13,900 |
| March | ..... | ..... | ..... | ..... | 20,900 |
| April | ..... | ..... | ..... | ..... | 26,800 |
| May | ..... | 109 | 50 | 76.1 | 4,680 |
| June | ..... | 1,040 | 41 | 381 | 22,700 |
| July | ..... | 1,230 | 69 | 356 | 21,900 |
| August | ..... | 4,200 | 330 | 1,430 | 87,900 |
| September | ..... | 5,030 | 69 | 662 | 39,400 |
| Water year 1922-23 | ..... | 5,030 | 15 | ..... | 266,860 |
| **1923-24** | | | | | |
| October | ..... | 10,700 | 240 | 2,050 | 126,000 |
| November | ..... | 240 | 109 | 163 | 9,710 |
| December | ..... | 240 | 59 | 115 | 7,090 |
| January | ..... | 50 | 30 | 38 | 2,360 |
| February | ..... | 1,720 | 40 | 437 | 25,200 |
| March | ..... | 4,610 | 300 | 1,584 | 97,400 |
| April | ..... | 18,500 | 650 | 5,590 | 335,000 |
| May | ..... | 590 | 110 | 288 | 17,800 |
| June | ..... | 4,100 | 80 | 634 | 37,800 |
| July | ..... | 1,860 | 175 | 531 | 33,600 |
| August | ..... | 650 | 80 | 233 | 14,300 |
| September | ..... | 140 | 23 | 47.4 | 2,820 |
| Water year 1923-24 | ..... | 18,520 | 23 | 980 | 709,000 |
| **1924-25** | | | | | |
| October | ..... | 2,450 | 15 | 528 | 32,500 |
| November | ..... | 112 | 32 | 69 | 4,120 |
| December | ..... | 26 | 15 | 18 | 1,080 |
| January | ..... | 15 | 10 | 13 | 793 |
| February | ..... | 1,040 | 15 | 663 | 36,800 |
| March | ..... | 12,400 | 1,230 | 4,761 | 293,000 |
| April | ..... | 1,340 | 176 | 445 | 26,500 |
| May | ..... | 176 | 46 | 85 | 5,220 |
| June | ..... | 5,850 | 210 | 2,130 | 126,000 |
| July | ..... | 1,860 | 46 | 400 | 24,600 |
| August | ..... | 210 | 22 | 70 | 4,290 |
| September | ..... | 345 | 22 | 120 | 7,130 |
| Water year 1924-25 | ..... | 12,400 | 10 | 775 | 562,033 |
| **1925-26** | | | | | |
| October | ..... | 46 | 15 | 27 | 1,690 |
| November | ..... | 15 | 15 | 15 | 890 |
| December | ..... | 32 | 15 | 24 | 1,460 |
| January | ..... | 15 | 10 | 13 | 800 |
| February | ..... | 210 | 10 | 49 | 2,730 |
| March | ..... | 5,850 | 86 | 1,821 | 111,900 |
| April | ..... | 1,720 | 112 | 654 | 38,900 |
| May | ..... | ..... | ..... | ..... | ..... |
| June | ..... | ..... | ..... | ..... | ..... |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1925-26 | ..... | ..... | ..... | ..... | 158,370 |

Note: No Record from October 1926 to September 1928.

| Month | Second Foot Days | Maximum | Minimum | Mean | Runoff in Acre-Feet |
|---|---|---|---|---|---|
| **1928** | | | | | |
| September | ..... | 480 | 13 | 140 | 8,330 |
| **1928-29** | | | | | |
| October | ..... | 174 | 20 | 63.7 | 3,920 |
| November 1-26 | ..... | 109 | 16 | 45.5 | 2,350 |
| December | ..... | ..... | ..... | ..... | 922 |
| January | ..... | ..... | ..... | ..... | 307 |
| February | ..... | ..... | ..... | ..... | 167 |
| March 11-31 | ..... | 13,500 | 1,130 | 6,470 | 269,000 |
| April | ..... | 13,100 | 1,050 | 3,210 | 191,000 |
| May | ..... | 28,800 | 416 | 3,120 | 192,000 |
| June | ..... | 33,700 | 251 | 4,690 | 279,000 |
| July | ..... | 368 | 115 | 212 | 13,000 |
| August | ..... | 188 | 29 | 82.6 | 5,080 |
| September | ..... | 234 | 24 | 55.5 | 3,300 |
| Water year 1928-29 | ..... | 33,700 | 16 | ..... | 958,650 |
| **1929-30** | | | | | |
| October | ..... | 580 | 60 | 185 | 11,400 |
| November 1-19 | ..... | 73 | 36 | 53.8 | 2,030 |
| December | ..... | ..... | ..... | ..... | 1,230 |
| January | ..... | ..... | ..... | ..... | 615 |
| February | ..... | ..... | ..... | ..... | 15,200 |
| March 9-31 | ..... | 2,040 | 305 | 1,080 | 49,300 |
| April | ..... | 493 | 90 | 176 | 10,500 |
| May | ..... | 346 | 51 | 147 | 9,040 |
| June | ..... | 3,320 | 286 | 1,310 | 78,000 |
| July | ..... | 674 | 25 | 148 | 9,100 |
| August | ..... | 416 | 10 | 93.0 | 5,720 |
| September | ..... | 3,560 | 32 | 300 | 17,900 |
| Water year 1929-30 | ..... | 3,560 | 10 | ..... | 210,035 |
| **1930-31** | | | | | |
| October | ..... | 58 | 23 | 35.7 | 2,200 |
| November | ..... | 31 | 16 | 21.4 | 1,270 |
| December | ..... | 33 | 16 | 20.7 | 1,270 |
| January | ..... | ..... | ..... | ..... | 1,310 |
| February | ..... | ..... | ..... | ..... | 9,220 |
| March | ..... | ..... | ..... | ..... | 7,260 |
| April | ..... | 391 | 24 | 88.8 | 5,280 |
| May | ..... | 48 | 17 | 23.6 | 1,450 |
| June | ..... | 1,660 | 50 | 315 | 18,700 |
| July | ..... | 814 | ..... | 296 | 18,200 |
| August | ..... | 1,130 | 70 | 395 | 24,300 |
| September | ..... | 416 | ..... | 121 | 7,200 |
| Water year 1930-31 | ..... | 1,660 | 16 | ..... | 97,660 |
| **1931-32** | | | | | |
| October | ..... | 268 | 44 | 91.8 | 5,640 |
| November | ..... | 152 | ..... | 57.5 | 3,420 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 26-31 | ..... | 2,250 | 1,300 | 1,690 | 20,000 |
| April | ..... | 12,200 | 120 | 1,790 | 107,000 |
| May | ..... | 3,950 | 188 | 776 | 47,700 |
| June | ..... | 3,740 | 197 | 1,400 | 83,300 |
| July | ..... | 3,290 | 56 | 524 | 32,200 |
| August | ..... | 456 | 33 | 97.0 | 5,960 |
| September | ..... | 404 | 11 | 57.7 | 3,430 |
| Water year 1931-32 | ..... | 12,200 | 11 | 622.4 | 308,650 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1932-33** | | | | | |
| October | ..... | 379 | 10 | 119 | 7,320 |
| November | ..... | 330 | 14 | 132 | 7,860 |
| December | ..... | 83 | ..... | 15.1 | 928 |
| January | ..... | ..... | 0 | 2.42 | 149 |
| February | ..... | 735 | 0 | 56.6 | 3,140 |
| March | ..... | 4,870 | 890 | 1,960 | 121,000 |
| April | ..... | 1,610 | 322 | 749 | 44,600 |
| May | ..... | 20,500 | 472 | 2,790 | 172,000 |
| June | ..... | 1,390 | 91 | 341 | 20,300 |
| July | ..... | 735 | 12 | 133 | 8,180 |
| August | ..... | 12 | 0 | 4.27 | 263 |
| September | ..... | 3.2 | 0 | .78 | 46 |
| Water year 1932-33 | ..... | 20,500 | 0 | 531 | 385,786 |
| **1933-34** | | | | | |
| October | ..... | ..... | 0.3 | 2.30 | 141 |
| November | ..... | ..... | ..... | 9.2 | 545 |
| December | ..... | ..... | 0 | .8 | 52 |
| January | ..... | ..... | ..... | 3.2 | 198 |
| February | ..... | ..... | ..... | 61.2 | 3,400 |
| March | ..... | 76 | 43 | 58.2 | 3,580 |
| April | ..... | 330 | 22 | 115 | 6,850 |
| May | ..... | 20 | 1.0 | 6.68 | 411 |
| June | ..... | 1,250 | .2 | 337 | 20,060 |
| July | ..... | 404 | 1.5 | 100 | 6,180 |
| August | ..... | 2.9 | 0 | .75 | 46 |
| September | ..... | .8 | 0 | .29 | 17 |
| Water year 1933-34 | ..... | 1,250 | 0 | 57.3 | 41,480 |

## LITTLE MISSOURI RIVER NEAR WATFORD CITY, NORTH DAKOTA

Location: Lat. 47°36′, long. 103°16′, in NW¼ sec. 35, T. 148N., R. 99 W. at highway bridge 17½ miles south of Watford City.

Drainage Area: 8,490 square miles.

Records available: October 1934 to September 1941, October 1943 to September 1944.

Extremes: Maximum discharge observed 32,600 second feet April 8, 1944, no flow at times.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1934-35** | | | | | |
| October | 46.5 | ..... | ..... | 1.5 | 92 |
| November | 45 | ..... | ..... | 1.5 | 89 |
| December | 31 | ..... | ..... | 1.0 | 61 |
| January | 0 | 0 | 0 | 0 | 0 |
| February | 0 | 0 | 0 | 0 | 0 |
| March | 4,509 | 714 | 0 | 145 | 8,940 |
| April | 3,043 | 370 | 19 | 101 | 6,040 |
| May | 6,085 | 474 | 70 | 196 | 12,070 |
| June | 22,838 | 2,090 | 171 | 761 | 45,300 |
| July | 59,536 | 21,000 | 103 | 1,921 | 118,100 |
| August | 3,787 | 399 | 28 | 122 | 7,510 |
| September | 737.2 | 62 | 7.6 | 24.6 | 1,460 |
| Water year 1934-35 | 100,657.7 | 21,000 | 0 | 276 | 199,662 |
| **1935-36** | | | | | |
| October | 201.7 | 8.2 | 3.1 | 6.51 | 400 |
| November | 64.8 | 3.1 | 1.3 | 2.16 | 129 |
| December | 81.3 | 48 | .1 | 2.62 | 161 |
| January | 3.1 | ..... | ..... | .1 | 6.1 |
| February | 0 | 0 | 0 | 0 | 0 |
| March | 73,211 | 8,620 | 24 | 2,362 | 145,200 |
| April | 30,325 | 2,660 | 230 | 1,011 | 60,150 |
| May | 3,064 | 220 | 20 | 98.8 | 6,080 |
| June | 556.6 | 54 | 3.8 | 18.6 | 1,100 |
| July | 1,860.5 | 548 | 0 | 60.0 | 3,690 |
| August | 785.4 | 276 | 0 | 25.3 | 1,560 |
| September | 41.5 | 4.3 | .1 | 1.38 | 82 |
| Water year 1935-36 | 110,194.9 | 8,620 | 0 | 301 | 218,558.1 |
| **1936-37** | | | | | |
| October | 38.9 | 3.8 | 0 | 1.25 | 77 |
| November | 53.5 | 3.6 | .6 | 1.78 | 106 |
| December | .4 | .1 | 0 | .01 | 1 |
| January | 0 | 0 | 0 | 0 | 0 |
| February | 0 | 0 | 0 | 0 | 0 |
| March | 20,681 | 2,070 | 0 | 667 | 41,020 |
| April | 26,120 | 2,940 | 62 | 871 | 51,810 |
| May | 4,090 | 950 | 30 | 132 | 8,110 |
| June | 74,899 | 8,430 | 122 | 2,497 | 148,500 |
| July | 36,423 | 3,800 | 131 | 1,175 | 72,240 |
| August | 43,562.7 | 5,360 | 6.1 | 1,405 | 86,410 |
| September | 6,773.4 | 1,380 | 9.4 | 226 | 13,430 |
| Water year 1936-37 | 212,641.9 | 8,430 | 0 | 583 | 421,704 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1937-38** | | | | | |
| October | 2,711 | 610 | 12 | 87.5 | 5,380 |
| November | 242 | 17 | 3 | 8.1 | 480 |
| December | 77 | 4 | 0 | 2.5 | 153 |
| January | 0 | 0 | 0 | 0 | 0 |
| February | 955 | 610 | 0 | 34.1 | 1,890 |
| March | 91,592 | 13,800 | 370 | 2,955 | 181,700 |
| April | 9,284 | 1,280 | 92 | 309 | 18,410 |
| May | 9,612 | 980 | 56 | 310 | 19,070 |
| June | 34,410 | 5,640 | 62 | 1,147 | 68,250 |
| July | 39,141 | 5,640 | 117 | 1,263 | 77,640 |
| August | 5,574 | 1,350 | 16 | 180 | 11,060 |
| September | 7,546 | 1,090 | 14 | 252 | 14,970 |
| Water year 1937-38 | 201,144 | 13,800 | 0 | 551 | 398,903 |
| **1938-39** | | | | | |
| October | 1,869 | 298 | 18 | 60.3 | 3,710 |
| November | 370 | 22 | ..... | 12.3 | 734 |
| December | 289 | 12 | ..... | 9.32 | 573 |
| January | 125 | ..... | 0 | 4.03 | 248 |
| February | 0 | 0 | 0 | 0 | 0 |
| March | 99,723 | 25,500 | 0 | 3,217 | 197,800 |
| April | 12,830 | 2,090 | 132 | 428 | 25,450 |
| May | 3,292 | 250 | 51 | 106 | 6,530 |
| June | 23,625 | 2,010 | 268 | 788 | 46,860 |
| July | 25,936 | 4,280 | 106 | 837 | 51,440 |
| August | 4,100 | 657 | 26 | 132 | 8,130 |
| September | 873.7 | 117 | 6.7 | 29.2 | 1,730 |
| Water year 1938-39 | 173,032.7 | 25,500 | 0 | 474 | 343,205 |
| **1939-40** | | | | | |
| October | 224.2 | 12 | 3.0 | 7.23 | 445 |
| November | 161 | ..... | ..... | 5.4 | 319 |
| December | 173 | ..... | ..... | 5.6 | 343 |
| January | 20 | ..... | 0 | .6 | 40 |
| February | 0 | 0 | 0 | 0 | 0 |
| March | 13,545 | 1,500 | 0 | 437 | 26,870 |
| April | 24,462 | 2,920 | 244 | 815 | 48,520 |
| May | 13,319 | 1,600 | 89 | 430 | 26,420 |
| June | 13,717 | 1,390 | 79 | 457 | 27,210 |
| July | 11,644 | 2,630 | 66 | 376 | 23,100 |
| August | 17,450 | 2,120 | 100 | 563 | 34,610 |
| September | 10,019 | 2,280 | 13 | 334 | 19,870 |
| Water year 1939-40 | 104,734.2 | 2,920 | 0 | 286 | 207,747 |
| **1940-41** | | | | | |
| October | 7,396 | 800 | 83 | 239 | 14,670 |
| November | 778 | 81 | 0 | 25.9 | 1,540 |
| December | 18.5 | 0 | 0 | .60 | 37 |
| January | 7.5 | 0 | 0 | .24 | 15 |
| February | 290 | 50 | 0 | 10.0 | 575 |
| March | 17,020 | 2,180 | 0 | 549 | 33,760 |
| April | 21,079 | 1,590 | 254 | 703 | 41,810 |
| May | 6,985 | 360 | 123 | 225 | 13,850 |
| June | 95,608 | 10,600 | 165 | 3,187 | 189,600 |
| July | 9,965 | 2,500 | 85 | 321 | 19,770 |
| August | 12,380 | 1,910 | 79 | 399 | 24,560 |
| September | 35,208 | 11,600 | 172 | 1,174 | 69,830 |
| Water year 1940-41 | 206,735.0 | 11,600 | 0 | 566 | 410,017 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1941-42** | | | | | |
| October | 14,018 | 1,380 | 107 | 452 | 27,800 |
| November | 1,976 | 103 | 28 | 65.9 | 3,920 |
| December | 783 | ..... | ..... | 25.3 | 1,550 |
| January | 10 | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 59,333 | 10,500 | 1 | 1,914 | 117,700 |
| April | 27,733 | 4,260 | 86 | 924 | 55,010 |
| May | 36,704 | 2,550 | 582 | 1,184 | 72,800 |
| June | 50,942 | 4,620 | 254 | 1,698 | 101,000 |
| July | 5,734 | 498 | 35 | 185 | 11,370 |
| August | 4,412 | 350 | 30 | 142 | 8,750 |
| September | 4,729 | 300 | 30 | 158 | 9,380 |
| Water year 1941-42 | 206,374 | 10,500 | ..... | 565 | 409,300 |
| **1942-43** | | | | | |
| October | 1,124 | 84 | 16 | 36.3 | 2,230 |
| November | 1,121 | 71 | 13 | 37.4 | 2,220 |
| December | 239 | ..... | ..... | 7.7 | 474 |
| January | 218 | 150 | ..... | 7.0 | 432 |
| February | 84,639 | 25,000 | ..... | 3,023 | 167,900 |
| March | 94,010 | 20,000 | 130 | 3,033 | 186,500 |
| April | 36,606 | 5,620 | 146 | 1,220 | 72,610 |
| May | 6,482 | 648 | 128 | 209 | 12,860 |
| June | 34,399 | 4,680 | 141 | 1,147 | 68,230 |
| July | 26,916 | 3,530 | 77 | 868 | 53,390 |
| August | 13,074 | 3,450 | 65 | 422 | 25,930 |
| September | 4,117 | 505 | 33 | 137 | 8,170 |
| Water year 1942-43 | 302,945 | 25,000 | 0 | 830 | 600,946 |
| **1943-44** | | | | | |
| October | 790 | 37 | 16 | 25.5 | 1,570 |
| November | 1,663 | 82 | 10 | 55.4 | 3,300 |
| December | 116 | 15 | 0 | 3.7 | 230 |
| January | 18.5 | ..... | ..... | .6 | 37 |
| February | 14.5 | ..... | ..... | .5 | 29 |
| March | 2,365 | 500 | 0 | 76.3 | 4,690 |
| April | 250,543 | 31,600 | 596 | 8,351 | 496,900 |
| May | 23,051 | 2,460 | 345 | 744 | 45,720 |
| June | 169,386 | 13,000 | 838 | 5,646 | 336,000 |
| July | 28,499 | 4,210 | 252 | 919 | 56,530 |
| August | 7,937 | 566 | 120 | 256 | 15,740 |
| September | 3,787 | 256 | 98 | 126 | 7,510 |
| Water year 1943-44 | 488,170 | 31,600 | 0 | 1,334 | 968,000 |

## LITTLE BEAVER CREEK NEAR MARMARTH, NORTH DAKOTA

Location: Wire-weight gage lat. 46°14′, long. 103°57′, in S½ sec. 7, T. 132 N., R. 106W 3½ miles southwest of Marmarth and 5 miles upstream from mouth.

Drainage Area: 633 square miles.

Records Available: April 1938 to September 1944.

Extremes: Maximum discharge 4,460 second-feet July 6, 1939.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1937-38 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 189 | 21 | ..... | ..... | 375 |
| May | 1,143.3 | 393 | 3.1 | ..... | 2,267 |
| June | 1,980.5 | 910 | .5 | ..... | 3,930 |
| July | 958.7 | 566 | ..... | ..... | 1,900 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | 464.8 | 209 | ..... | ..... | 922 |
| Water year 1937-38 | 4,736.3 | 910 | 0 | ..... | 9,400 |
| 1938-39 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | 8.9 | 1.5 | ..... | ..... | 17.6 |
| December | 7 | 1.5 | ..... | ..... | 13.8 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 5,496.1 | 1,750 | ..... | ..... | 10,900 |
| April | 217.4 | 20 | 3 | ..... | 431 |
| May | 411.5 | 208 | 1.5 | ..... | 816 |
| June | 1,299.4 | 244 | 4.2 | ..... | 2,577 |
| July | 2,876.9 | 1.840 | .3 | ..... | 5,705 |
| August | 44.4 | 22 | ..... | ..... | 88 |
| September | .3 | .2 | ..... | ..... | .6 |
| Water year 1938-39 | 10,361.9 | 1.840 | ..... | ..... | 20,550 |
| 1939-40 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | 9.6 | 2.5 | ..... | ..... | 19 |
| December | 217.5 | 10 | 2.5 | ..... | 431.3 |
| January | 2.5 | .5 | ..... | ..... | 5 |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 2,059.8 | 324 | 3 | ..... | 4,085 |
| April | 2,974.3 | 546 | 6.5 | ..... | 5,900 |
| May | 248.1 | 96 | .2 | ..... | 492 |
| June | 101.2 | 42 | ..... | ..... | 200.7 |
| July | 78.6 | 35 | ..... | ..... | 156 |
| August | 310.2 | 268 | ..... | ..... | 615 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1939-40 | 6,001.8 | 546 | 0 | ..... | 11,900 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1940-41** | | | | | |
| October | 48.1 | 10 | ..... | 1.55 | 95 |
| November | 9 | 1 | ..... | .3 | 18 |
| December | .5 | .1 | ..... | .02 | 1 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 305.5 | 67 | .2 | 9.85 | 606 |
| April | 192.9 | 42 | .8 | 6.43 | 383 |
| May | 173.7 | 27 | .1 | 5.6 | 345 |
| June | 3,877 | 1,250 | 1.6 | 129 | 7,690 |
| July | 36.8 | 8.4 | ..... | 1.19 | 73 |
| August | 432 | 118 | ..... | 13.9 | 857 |
| September | 1,653.2 | 395 | 2.2 | 55.1 | 3,280 |
| **Water year 1940-41** | 6,728.7 | 1,250 | 0 | 18.4 | 13,350 |
| **1941-42** | | | | | |
| October | ..... | 805 | 3.1 | 68.9 | 4,240 |
| November | ..... | 4.3 | 2 | 2.66 | 158 |
| December | ..... | 18 | .7 | 3.04 | 187 |
| January | ..... | ..... | 0 | .35 | 21 |
| February | ..... | 3.5 | 0 | 1.25 | 69 |
| March | ..... | 1,200 | .5 | 156 | 9,590 |
| April | ..... | 406 | 15 | 81.7 | 4,860 |
| May | ..... | 778 | 11 | 83.2 | 5,110 |
| June | ..... | 1,130 | 7.4 | 76.1 | 4,530 |
| July | ..... | 18 | 1 | 4.62 | 284 |
| August | ..... | 123 | .3 | 9.43 | 580 |
| September | ..... | 48 | 1 | 4.91 | 292 |
| **Water year 1941-42** | ..... | 1,200 | 0 | 41.3 | 29,921 |
| **1942-43** | | | | | |
| October | ..... | 2.6 | 1.6 | 2.25 | 138 |
| November | ..... | 2.6 | 1.8 | 2.33 | 139 |
| December | ..... | 10 | ..... | 2.47 | 152 |
| January | ..... | 100 | 0 | 8.35 | 514 |
| February | ..... | 3,000 | 0 | 284 | 15,770 |
| March | ..... | 2,720 | 1.5 | 271 | 16,670 |
| April | ..... | 62 | 7.4 | 17.8 | 1,060 |
| May | ..... | 26 | 5.1 | 8.82 | 542 |
| June | ..... | 2,330 | 4.1 | 225 | 13,370 |
| July | ..... | 388 | 2.3 | 42.3 | 2,600 |
| August | ..... | 378 | 1.4 | 33 | 2,030 |
| September | ..... | 4.6 | 1.6 | 2.21 | 132 |
| **Water year 1942-43** | ..... | 3,000 | 0 | 73.4 | 53,117 |
| **1943-44** | | | | | |
| October | 55.6 | 3.7 | .9 | 1.79 | 110 |
| November | 139.7 | 7.4 | 2.3 | 4.66 | 277 |
| December | 76.6 | 4.1 | ..... | 2.47 | 152 |
| January | 12.1 | ..... | ..... | .39 | 24 |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 240 | 150 | ..... | 7.7 | 476 |
| April | 24,068 | 4,660 | 23 | 802 | 47,740 |
| May | 653 | 27 | 13 | 21.1 | 1,300 |
| June | 12,203 | 3,700 | 11 | 407 | 24,200 |
| July | 1,156.6 | 770 | 4.2 | 37.3 | 2,290 |
| August | 186.4 | 50 | 2.5 | 6.01 | 370 |
| September | 207.7 | 41 | 3.2 | 6.92 | 412 |
| **Water year 1943-44** | 38,998.7 | 4,660 | 0 | 107 | 77,400 |

## LITTLE MUDDY RIVER NEAR WILLISTON, NORTH DAKOTA

Location: Sec. 31, T. 155 N., R. 100 W. half a mile upstream from bridge on U. S. Highway 2 and 4½ miles northeast of Williston.

Records Available: June 1932 to July 1933 (discontinued); February 1904 to April 1909.

Extremes: Maximum (Est.) 4,340 second-feet Feb. 1-20, 1933.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1903-04 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | 6.5 | 400 |
| February | ..... | ..... | ..... | 7 | 400 |
| March | ..... | ..... | ..... | 9.8 | 600 |
| April | ..... | 2,990 | 500 | 1,228.5 | 73,100 |
| May | ..... | 684 | 23 | 164.1 | 10,100 |
| June | ..... | 66 | 16 | 24.4 | 1,450 |
| July | ..... | 16 | 6 | 11.9 | 730 |
| August | ..... | 10 | 6 | 8.1 | 500 |
| September | ..... | 10 | 6 | 8.6 | 510 |
| Water year 1903-04 | ..... | 2,990 | 6 | ..... | 87,790 |
| 1904-05 | | | | | |
| October | ..... | 16 | 10 | 10.4 | 640 |
| November | ..... | 16 | 16 | 16 | 950 |
| December | ..... | ..... | ..... | 14.6 | 900 |
| January | ..... | ..... | ..... | 9.8 | 600 |
| February | ..... | ..... | ..... | 9 | 500 |
| March | ..... | 200 | 16 | 55.9 | 3,440 |
| April | ..... | 16 | 6 | 9.1 | 540 |
| May | ..... | 10 | 10 | 10 | 620 |
| June | ..... | 150 | 10 | 27.1 | 1,610 |
| July | ..... | 16 | 10 | 15 | 920 |
| August | ..... | 10 | 6 | 7 | 430 |
| September | ..... | 10 | 6 | 6.1 | 360 |
| Water year 1904-05 | ..... | 200 | 6 | ..... | 11,510 |
| 1905-06 | | | | | |
| October | ..... | 16 | 10 | 11.1 | 680 |
| November | ..... | 16 | 10 | 11.1 | 660 |
| December | ..... | ..... | ..... | 10.1 | 620 |
| January | ..... | ..... | ..... | 8.9 | 500 |
| February | ..... | ..... | ..... | 7.9 | 440 |
| March | ..... | 60 | 27 | 12 | 740 |
| April | ..... | 409 | 20 | 84.2 | 5,010 |
| May | ..... | 60 | 20 | 26.3 | 1,620 |
| June | ..... | 1,010 | 35 | 200 | 11,900 |
| July | ..... | 35 | 6 | 20.2 | 1,240 |
| August | ..... | 14 | 6 | 9.4 | 580 |
| September | ..... | 9 | 6 | 8.2 | 490 |
| Water year 1905-06 | ..... | 1,010 | 6 | ..... | 24,480 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Runoff in Acre-Feet |
|---|---|---|---|---|---|
| **1906-07** | | | | | |
| October | ..... | 9 | 9 | 9 | 550 |
| November | ..... | 14 | 9 | 9.7 | 580 |
| December | ..... | ..... | ..... | 7 | 430 |
| January | ..... | ..... | ..... | 6 | 370 |
| February | ..... | ..... | ..... | 5.9 | 330 |
| March | ..... | ..... | ..... | 21.1 | 1,300 |
| April | ..... | 1,140 | 83 | 725.2 | 43,100 |
| May | ..... | 114 | 34 | 64.4 | 3,960 |
| June | ..... | 34 | 16 | 28.4 | 1,690 |
| July | ..... | 21 | 7 | 12 | 740 |
| August | ..... | 9 | 6 | 4.7 | 290 |
| September | ..... | 12 | 7 | 8.2 | 490 |
| Water year 1906-07 | ..... | 1,140 | 6 | ..... | 53,880 |
| **1907-08** | | | | | |
| October | ..... | 9 | 9 | 9 | 550 |
| November | ..... | 9 | ..... | 8.2 | 490 |
| December | ..... | ..... | ..... | 7 | 430 |
| January | ..... | ..... | ..... | 5 | 310 |
| February | ..... | ..... | ..... | 3.8 | 220 |
| March | ..... | 27 | 16 | 10.2 | 630 |
| April | ..... | 1,580 | 16 | 209.7 | 12,480 |
| May | ..... | 170 | 16 | 48.1 | 2,960 |
| June | ..... | 361 | 16 | 74.6 | 4,440 |
| July | ..... | 21 | 6 | 8 | 490 |
| August | ..... | 6 | 5 | 5 | 310 |
| September | ..... | 5 | 5 | 5 | 320 |
| Water year 1907-08 | ..... | 1,580 | 5 | ..... | 23,630 |
| **1908-09** | | | | | |
| October | ..... | 9 | 5 | 7.2 | 440 |
| November | ..... | 7 | 6 | 6.1 | 360 |
| December | ..... | ..... | ..... | 5 | 310 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | 284.6 | 17,500 |
| April | ..... | 1,670 | ..... | 54.5 | 3,480 |
| May | ..... | ..... | ..... | ..... | ..... |
| June | ..... | ..... | ..... | ..... | ..... |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1908-09 | ..... | 1,670 | 5 | ..... | 22,090 |
| Note: Discontinued until 1931-1932. | | | | | |
| **1931-32** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | ..... | ..... | ..... | ..... |
| May | ..... | ..... | ..... | ..... | ..... |
| June 15-30 | ..... | 206 | 16 | 57.6 | 1,830 |
| July | ..... | 61 | 5 | 14.1 | 867 |
| August | ..... | 7 | 4 | 5.3 | 326 |
| September | ..... | 8 | 6 | 6.3 | 375 |
| Water year 1931-32 | ..... | 206 | 5 | ..... | 3,398 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Runoff in Acre-Feet |
|---|---|---|---|---|---|
| 1932-33 | | | | | |
| October | ..... | 14.0 | 5.4 | 8.27 | 508 |
| November | ..... | 11.0 | ..... | 8.50 | 506 |
| December | ..... | ..... | ..... | 2.39 | 147 |
| January | ..... | ..... | ..... | .20 | 12 |
| February | ..... | 546 | .1 | 40.2 | 2,230 |
| March | ..... | 798 | 207.0 | 414 | 25,500 |
| April | ..... | 139 | 22.0 | 48.0 | 2,860 |
| May | ..... | 95 | 15.9 | 27.7 | 1,700 |
| June | ..... | 23.0 | 7.2 | 9.88 | 588 |
| July 1-29 | ..... | 6.7 | 2.8 | 4.04 | 232 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1932-33 | ..... | 798 | .1 | ..... | 34,283 |

## KNIFE RIVER NEAR BRONCHO, NORTH DAKOTA

Location: In Southeast quarter of Section 4, Township 142 North, Range 90 West, a half mile below mouth of Elm Creek, and 15 miles above mouth of Spring Creek.

Drainage Area: 1,200 Square Miles.

Records Available: May 1903 to September 1927.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1902-03 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | ..... | ..... | ..... | ..... |
| May 29-31 | ..... | 83 | 64 | 74 | 440 |
| June | ..... | 64 | 24 | 30 | 1,785 |
| July | ..... | 840 | 16 | 60 | 3,689 |
| August | ..... | 311 | 16 | 46 | 2,828 |
| September | ..... | 217 | 13 | 62 | 3,689 |
| Water year 1902-03 | ..... | 840 | 13 | ..... | 12.431 |
| 1903-04 | | | | | |
| October | ..... | 13 | 11 | 12 | 738 |
| November 1-14 | ..... | 13 | 9 | 11 | 305 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 3,500 | 106 | 1,040 | 61,900 |
| May | ..... | 330 | 39 | 94.8 | 5,830 |
| June | ..... | 350 | 2 | 72.9 | 4,340 |
| July | ..... | 39 | 5 | 10.3 | 633 |
| August | ..... | 4 | 3 | 3.65 | 224 |
| September | ..... | 4 | 3 | 3.1 | 184 |
| Water year 1903-04 | ..... | 3,500 | 2 | ..... | 74,154 |
| 1904-05 | | | | | |
| October | ..... | 5.5 | 3 | 4.42 | 272 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 23-31 | ..... | 25 | 14 | 18.3 | 327 |
| April | ..... | 14 | 4 | 7.4 | 440 |
| May | ..... | 25 | 4 | 10.4 | 640 |
| June | ..... | 597 | 4 | 81.4 | 4,840 |
| July | ..... | 555 | 4 | 58.3 | 3,580 |
| August | ..... | 283 | 1 | 15.8 | 972 |
| September | ..... | 4 | 0 | 1.42 | 85 |
| Water year 1904-05 | ..... | 597 | 0 | ..... | 11,156 |
| 1905-06 | | | | | |
| October | ..... | 5.5 | 2 | 2.4 | 148 |
| November 1-26 | ..... | 7 | 2 | 4.08 | 210 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 1,100 | 8.5 | 116 | 6,900 |
| May | ..... | 2,400 | 5.5 | 397 | 24,400 |
| June | ..... | 2,420 | 44 | 748 | 44,500 |
| July | ..... | 1,700 | 16 | 103 | 6,330 |
| August | ..... | 36 | 16 | 24.6 | 1,510 |
| September | ..... | 22 | 10 | 14.4 | 857 |
| Water year 1905-06 | ..... | 2,420 | 5.5 | ..... | 84,855 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1906-07** | | | | | |
| October | ..... | 10 | 7 | 9.71 | 597 |
| November 1-16 | ..... | 10 | 10 | 10 | 317 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 373 | 32 | 98.7 | 5,870 |
| May | ..... | 32 | 19 | 24.6 | 1,510 |
| June | ..... | 266 | 19 | 38.2 | 2,270 |
| July | ..... | 40 | 4 | 12.1 | 744 |
| August | ..... | 40 | 4 | 8.29 | 510 |
| September | ..... | 10 | 2 | 3.86 | 230 |
| Water year 1906-07 | ..... | 373 | 2 | ..... | 12,048 |
| **1907-08** | | | | | |
| October | ..... | 7 | 2 | 4.23 | 266 |
| November | ..... | 7 | 7 | 7 | 417 |
| December 1-14 | ..... | 10 | 7 | 7.1 | 197 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 12-21 | ..... | 622 | 108 | 293 | 11,600 |
| April | ..... | 586 | 19 | 102 | 6,070 |
| May | ..... | 597 | 10 | 114 | 7,010 |
| June | ..... | 902 | 19 | 156 | 9,280 |
| July | ..... | 19 | 4 | 9.67 | 595 |
| August | ..... | 7 | 4 | 4.56 | 282 |
| September | ..... | 4 | 0 | 2.37 | 141 |
| Water year 1907-08 | ..... | 902 | ..... | ..... | 28,848 |
| **1908-09** | | | | | |
| October | ..... | 14 | 4 | 5.52 | 339 |
| November 1-21 | ..... | 7 | 4 | 5.43 | 226 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | 640 | 39,400 |
| April | ..... | 318 | 25 | 91.8 | 6,460 |
| May | ..... | 856 | 10 | 102 | 6,270 |
| June | ..... | 2,530 | 19 | 373 | 22,200 |
| July | ..... | 1,080 | 14 | 153 | 9,410 |
| August | ..... | 960 | 10 | 159 | 9,780 |
| September | ..... | 19 | 7 | 11.5 | 684 |
| Water year 1908-09 | ..... | 2,530 | 7 | ..... | 94,769 |
| **1909-10** | | | | | |
| October | ..... | 19 | 10 | 13.1 | 806 |
| November | ..... | ..... | ..... | 14 | 883 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | 5 | 307 |
| February | ..... | ..... | ..... | 6 | 333 |
| March | ..... | 3,210 | ..... | 859 | 52,800 |
| April | ..... | 70 | 19 | 32.4 | 1,930 |
| May | ..... | 19 | 14 | 15 | 922 |
| June | ..... | 471 | 10 | 54.3 | 3,230 |
| July | ..... | 19 | 4 | 8.5 | 521 |
| August | ..... | 10 | 4 | 8.5 | 526 |
| September | ..... | 14 | 10 | 11.6 | 690 |
| Water year 1909-10 | ..... | 3,210 | 4 | ..... | 62,948 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre Feet |
|---|---|---|---|---|---|
| **1910-11** | | | | | |
| October | ..... | 10 | 10 | 10 | 615 |
| November | ..... | 14 | 10 | 12.4 | 738 |
| December | ..... | ..... | ..... | 6 | 369 |
| January | ..... | ..... | ..... | 5 | 307 |
| February | ..... | ..... | ..... | 4 | 222 |
| March | ..... | 411 | ..... | 83.1 | 5,110 |
| April | ..... | 80 | 24 | 42 | 2,500 |
| May | ..... | 31 | 6 | 14.8 | 910 |
| June | ..... | 641 | 10 | 92.8 | 5,520 |
| July | ..... | 82 | 2 | 10.2 | 627 |
| August | ..... | 166 | 4 | 45.6 | 2,800 |
| September | ..... | 282 | 7 | 61.1 | 3,640 |
| Water year 1910-11 | ..... | 641 | 2 | ..... | 23,358 |
| **1911-12** | | | | | |
| October | ..... | 32 | 7 | 11.5 | 707 |
| November | ..... | ..... | ..... | 8 | 476 |
| December | ..... | ..... | ..... | 5 | 307 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 27-31 | ..... | 5,000 | ..... | 2,456 | 24,357 |
| April | ..... | 3.560 | 40 | 1,160 | 69,000 |
| May | ..... | 2,920 | 40 | 571 | 35,100 |
| June | ..... | 298 | 27 | 70.1 | 4,170 |
| July | ..... | 356 | 4 | 69.4 | 4,270 |
| August | ..... | 78 | 13 | 30.1 | 1,850 |
| September | ..... | 40 | 13 | 18.9 | 1,120 |
| Water year 1911-12 | ..... | 5,000 | 4 | ..... | 141,357 |
| **1912-13** | | | | | |
| October | ..... | 57 | 22 | 28.5 | 1,750 |
| November | ..... | ..... | ..... | 52.2 | 3,110 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 5.990 | 27 | 642 | 38,200 |
| May | ..... | 40 | 22 | 27.4 | 1,680 |
| June | ..... | 27 | 17 | 18.7 | 1,110 |
| July | ..... | 13 | 6 | 11.6 | 713 |
| August | ..... | 22 | 6 | 14.4 | 885 |
| September | ..... | 17 | 6 | 8.9 | 530 |
| Water year 1912-13 | ..... | ..... | ..... | ..... | 47,978 |
| **1913-14** | | | | | |
| October | ..... | 13 | 9 | 11.6 | 712 |
| November | ..... | 17 | 13 | 14.2 | 845 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | 17.2 | 1,060 |
| April | ..... | 1,170 | 17 | 109 | 6,520 |
| May | ..... | 253 | 13 | 76.1 | 4,680 |
| June | ..... | 7,700 | 9 | 1,190 | 70,900 |
| July | ..... | 525 | 13 | 80.1 | 4,960 |
| August | ..... | 161 | 17 | 29.3 | 1,800 |
| September | ..... | 19 | 11 | 13.5 | 803 |
| Water year 1913-14 | ..... | 7,700 | 9 | 169.2 | 92,280 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1914-15** | | | | | |
| October | ..... | 13 | 9 | 11.1 | 684 |
| November 1-14 | ..... | ..... | ..... | 13 | 361 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 95 | 32 | 55.4 | 3,290 |
| May | ..... | 78 | 27 | 35.6 | 2,190 |
| June | ..... | 2,320 | 44 | 349 | 20,800 |
| July | ..... | 315 | 22 | 77.1 | 4,740 |
| August | ..... | 179 | 11 | 40 | 2,460 |
| September | ..... | 27 | 9 | 14.2 | 845 |
| Water year 1914-15 | ..... | 2,320 | 9 | 78.2 | 35,370 |
| **1915-16** | | | | | |
| October | ..... | 395 | 12 | 61.9 | 3,810 |
| November | ..... | ..... | ..... | 12 | 714 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 4,600 | 56 | 1,050 | 62.500 |
| May | ..... | 86 | 38 | 47.3 | 2,910 |
| June | ..... | 810 | 27 | 156 | 9,280 |
| July | ..... | 627 | 11 | 61.2 | 3,760 |
| August | ..... | 33 | 7 | 14 | 861 |
| September | ..... | 11 | 7 | 8.2 | 488 |
| Water year 1915-16 | ..... | 4,600 | 7 | 174.2 | 84,323 |
| **1916-17** | | | | | |
| October | ..... | 21 | 11 | 17.3 | 1,060 |
| November 1-10 | ..... | 16 | 16 | 16 | 317 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 1,320 | 164 | 539 | 32,100 |
| May | ..... | 124 | 27 | 45.3 | 2,790 |
| June | ..... | 47 | 21 | 29.5 | 1,760 |
| July | ..... | 21 | 4 | 11.1 | 682 |
| August | ..... | 11 | 4 | 6.35 | 390 |
| September | ..... | 4 | 4 | 4 | 238 |
| Water year 1916-17 | ..... | 1,320 | 4 | 88.5 | 39,337 |
| **1917-18** | | | | | |
| October | ..... | 11 | 4 | 9.1 | 560 |
| November | ..... | 11 | 11 | 11 | 524 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 17-31 | ..... | 2,800 | 88 | 1,170 | 34,800 |
| April | ..... | 409 | 25 | 103 | 6,130 |
| May | ..... | 57 | 14 | 19.5 | 1,200 |
| June | ..... | 25 | 7 | 15.6 | 928 |
| July | ..... | 290 | 5 | 28.5 | 1,750 |
| August | ..... | 4,680 | 7 | 730 | 44,900 |
| September | ..... | 67 | 19 | 32.2 | 1,920 |
| Water year 1917-18 | ..... | 4,680 | 4 | 184.7 | 92,712 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1918-19** | | | | | |
| October | ..... | 25 | 19 | 23.8 | 1,460 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 3,160 | 25 | 516 | 30,700 |
| May | ..... | 112 | 12 | 44.3 | 2,720 |
| June | ..... | 201 | 4 | 21.8 | 1,300 |
| July | ..... | 4 | 2 | 2.3 | 143 |
| August | ..... | 348 | 2 | 16.1 | 990 |
| September | ..... | 4 | 2 | 2.3 | 135 |
| Water year 1918-19 | ..... | ..... | ..... | ..... | 37,448 |
| Note: No record from November 1919 to October 1921. | | | | | |
| **1921-22** | | | | | |
| October 10-31 | ..... | 7 | 3 | 5.13 | 224 |
| November 1-17 | ..... | 9.5 | 7 | 8.68 | 293 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | 703 | ..... | 230 | 14,100 |
| April | ..... | 1,260 | 28 | 253 | 15,100 |
| May | ..... | 52 | 7 | 21.6 | 1,330 |
| June | ..... | 3,200 | 4 | 319 | 19,000 |
| July | ..... | 196 | 7 | 22.8 | 1,400 |
| August | ..... | 3,780 | 4 | 181 | 11,100 |
| September | ..... | 47 | 4 | 16.2 | 964 |
| Water year 1921-22 | ..... | 3,780 | 3 | 126.6 | 63,511 |
| **1922-23** | | | | | |
| October | ..... | 12 | 7 | 9.42 | 579 |
| November | ..... | 62 | 12 | 24.1 | 1,430 |
| December | ..... | ..... | ..... | 9 | 553 |
| January | ..... | ..... | ..... | 7 | 430 |
| February | ..... | ..... | ..... | 6 | 333 |
| March | ..... | 3,060 | 19 | 765 | 47,000 |
| April | ..... | 4,730 | 3 | 770 | 45,800 |
| May | ..... | 3 | 1 | 1.42 | 87 |
| June | ..... | 3 | 1 | 1.07 | 63 |
| July | ..... | 520 | 2 | 85.3 | 5,240 |
| August | ..... | 72 | 2 | 26.1 | 1,600 |
| September | ..... | 452 | 3 | 51.6 | 3,070 |
| Water year 1922-23 | ..... | 4,730 | 1 | 146.7 | 106,185 |
| **1923-24** | | | | | |
| October | ..... | 896 | 7 | 96.3 | 5,920 |
| November | ..... | 28 | 7 | 12.8 | 762 |
| December 1-26 | ..... | 7 | 4.5 | 4.98 | 258 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | 416 | 12 | 92.6 | 5,690 |
| April | ..... | 1,580 | 37 | 199 | 11,800 |
| May | ..... | 82 | 28 | 40.8 | 2,510 |
| June | ..... | 1,400 | 19 | 230 | 13,700 |
| July | ..... | 378 | 19 | 90.4 | 5,560 |
| August | ..... | 19 | 12 | 12.5 | 769 |
| September | ..... | 19 | 12 | 14.6 | 869 |
| Water year 1923-24 | ..... | 1,580 | 4.5 | 80.1 | 47,838 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Runoff in Acre-Feet |
|---|---|---|---|---|---|
| 1924-25 | | | | | |
| October | ..... | 497 | 25 | 85 | 5,210 |
| November | ..... | 25 | 12 | 21 | 1,240 |
| December | ..... | 15 | 9 | 12 | 712 |
| January | ..... | 9 | 7 | 8 | 480 |
| February | ..... | 181 | 8 | 42 | 2,320 |
| March | ..... | 923 | 7 | 137 | 8,420 |
| April | ..... | 91 | 33 | 49 | 2,890 |
| May | ..... | 33 | 4 | 20 | 1,220 |
| June | ..... | 1,850 | 7 | 142 | 8,470 |
| July | ..... | 12 | 2 | 7 | 401 |
| August | ..... | 2 | 2 | 2 | 123 |
| September | ..... | 7 | 2 | 3 | 196 |
| Water year 1924-25 | ..... | 1,850 | 2 | 44 | 31,700 |
| No record for 1925-1926. | | | | | |
| 1926-27 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | 397 | 7 | 149 | 9,180 |
| April | ..... | 71 | 25 | 51 | 3.040 |
| May | ..... | 3,940 | 25 | 911 | 55,990 |
| June | ..... | 126 | 21 | 66 | 3,930 |
| July | ..... | 280 | 42 | 138 | 8,460 |
| August | ..... | 42 | 33 | 35 | 2.130 |
| September | ..... | 81 | 33 | 42 | 2,520 |
| Water year 1926-27 | ..... | 3,940 | 7 | 177 | 8,520 |

## KNIFE RIVER NEAR GOLDEN VALLEY, NORTH DAKOTA

Location: Latitude 47°09′, Longitude 102°5′, in SW¼ Section 3, Township 142 North, Range 90 West, at bridge on county highway about 2½ miles downstream from Elm Creek, 10 miles south of Golden Valley, 17 miles North of Hebron, and about 29 miles upstream from Spring Creek.

Drainage Area: 1,230 square miles.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1942-43** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 24-30 | 587 | 113 | 45 | 83.9 | 1,160 |
| May | 1,220 | 116 | 23 | 39.4 | 2,420 |
| June | 6,290 | 1,270 | 22 | 210 | 12,480 |
| July | 1.579 | 228 | 6 | 50.9 | 3,130 |
| August | 1,095 | 136 | 9 | 35.3 | 2,170 |
| September | 468 | 51 | 8 | 15.6 | 928 |
| Water year 1942-43 | ..... | ..... | ..... | ..... | 22,290 |
| **1943-44** | | | | | |
| October | 348 | 13 | 10 | 11.2 | 690 |
| November | 370 | 15 | 9 | 12.3 | 734 |
| December | 248 | 10 | 6 | 8 | 492 |
| January | 151 | 6 | 4 | 4.9 | 300 |
| February | 163 | 6 | 5 | 5.6 | 323 |
| March | 3,293 | 745 | 6 | 106 | 6,530 |
| April | 14,293 | 3,180 | 22 | 476 | 28,350 |
| May | 1,293 | 156 | 20 | 41.7 | 2,560 |
| June | 20.928 | 2,420 | 57 | 698 | 41,510 |
| July | 2,219 | 264 | 18 | 71.6 | 4,400 |
| August | 648 | 73 | 10 | 20.9 | 1,290 |
| September | 294 | 12 | 8 | 9.8 | 583 |
| Water year 1943-44 | 44.248 | 3.180 | 4 | 121 | 87,760 |

## KNIFE RIVER AT HAZEN, NORTH DAKOTA

Location: Latitude 47°17′, Longitude 101°37′, in NE¼ Sec. 19, Township 144N., Range 86W., at County highway bridge, 0.5 miles south of Hazen, Mercer County, and 2 miles upstream from Antelope Creek.

Drainage Area: 2,352 Square miles.

Records Available: October 1928 to August 1933, August 1937 to September 1944.

Extreme: Maximum discharge 11,400 second-feet March 26, 27, 1943.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1928-29** | | | | | |
| October 19-31 | ..... | 27 | 24 | 26.1 | 673 |
| November 1-23 | ..... | 47 | 24 | 30.6 | 1,400 |
| March 26-31 | ..... | 548 | 315 | 436 | 5,190 |
| April | ..... | 680 | 35 | 124 | 7,380 |
| May 1-4 | ..... | 41 | 34 | 38 | 301 |
| June | ..... | 845 | 26 | 192 | 11,400 |
| July | ..... | 245 | 9 | 25.9 | 1,590 |
| August | ..... | 15 | 1.2 | 8.42 | 518 |
| September | ..... | 17 | 1.4 | 6.47 | 385 |
| Water year 1928-29 | ..... | 845 | 1.2 | 65.2 | 28,837 |
| **1929-30** | | | | | |
| October | 310.9 | 20 | 5.6 | 10.0 | 615 |
| November | 98.4 | 13 | 8.0 | 10.9 | 195 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | 14,918 | 3,070 | 635 | 1,860 | 29,500 |
| March | 31,287 | 2,740 | 305 | 1,010 | 62,100 |
| April | 6,086 | 335 | 78 | 203 | 12,100 |
| May | 2,448 | 165 | 29 | 79.0 | 4,860 |
| June | 7,470 | 1,870 | 25 | 249 | 14,800 |
| July | 569.2 | 56 | 6.2 | 18.4 | 1,130 |
| August | 649.4 | 33 | 8.4 | 20.9 | 1,290 |
| September | 1,779 | 87 | 34 | 59.3 | 3,530 |
| Water year 1929-30 | 65,597.9 | 3,070 | 6.2 | 240.8 | 130,120 |
| **1930-31** | | | | | |
| October | 1,915.8 | 125 | 8.8 | 61.8 | 3,800 |
| November 1-18 | 278.4 | 22 | 8.4 | 15.5 | 553 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 16-31 | 1,092 | 81 | 44 | 68.2 | 2,160 |
| April | 1,200 | 69 | 18 | 40.0 | 2,380 |
| May | 528 | 19 | 15 | 17.0 | 1,050 |
| June | 1,749 | 496 | 11 | 58.3 | 3,470 |
| July | 1,235.8 | 194 | 6.2 | 39.9 | 2,450 |
| August | 1,387 | 170 | 15 | 44.7 | 2,750 |
| September | 4,099 | 986 | 3.8 | 137 | 8,150 |
| Water year 1930-31 | 13,485.0 | 986 | 3.8 | 95.1 | 26,763 |
| **1931-32** | | | | | |
| October | 760 | 114 | 12 | 24.5 | 1,510 |
| November | 231.9 | 13 | 1.6 | 7.73 | 460 |
| December | 215.5 | 13 | 2.3 | 6.95 | 427 |
| March | 9,021 | 1,080 | 73 | 291 | 17,900 |
| April | 4,181 | 696 | 38 | 139 | 8,270 |
| May | 1,962 | 274 | 19 | 63.3 | 3,890 |
| June | 7,310 | 1,250 | 24 | 244 | 14,500 |
| July | 576.4 | 52 | 8.6 | 18.6 | 1,140 |
| August | 253.4 | 8.6 | 7.4 | 8.17 | 502 |
| September | 382.5 | 38 | ..... | 128 | 762 |
| Water year 1931-32 | 24,893.7 | 1,250 | 1.6 | 81.3 | 49,361 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1932-33** | | | | | |
| October | 537 | 35 | 3.6 | 17.3 | 1,060 |
| November | 1,003 | 56 | ..... | 33.4 | 1,990 |
| December | 354 | ..... | ..... | 11.4 | 701 |
| January | 210 | ..... | ..... | 6.8 | 418 |
| February | 2,169 | 1,370 | ..... | 77.5 | 4,300 |
| March | 36,915 | 1,930 | 535 | 1,190 | 73,200 |
| April | 5,210 | 550 | 64 | 174 | 10,400 |
| May | 3,548 | 658 | 37 | 114 | 7,010 |
| June | 743 | ..... | ..... | 247 | 1,470 |
| July | 3,316 | 15 | 4.4 | 10.7 | 658 |
| August | 316 | 6.8 | 6.0 | 6.32 | 63 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water Year 1932-33 | 51,052.2 | 1,980 | 0 | 180.3 | 101,270 |
| Discontinued in 1933, and re-opened again in 1937. | | | | | |
| **1936-37** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | ..... | ..... | ..... | ..... |
| May | ..... | ..... | ..... | ..... | ..... |
| June | ..... | ..... | ..... | ..... | ..... |
| July | ..... | ..... | ..... | ..... | ..... |
| August | 91 | ..... | ..... | ..... | 180 |
| September | 424 | ..... | ..... | ..... | 841 |
| Water year 1936-37 | 515 | ..... | ..... | ..... | 1,021 |
| **1937-38** | | | | | |
| October | 495 | 26 | 9 | 16.0 | 982 |
| November | 666 | 34 | 14 | 22.2 | 1,320 |
| December | 252.4 | 17 | 4.0 | 8.14 | 501 |
| January | 236 | 11 | 5 | 7.6 | 468 |
| February | 84.8 | 5 | 2.0 | 3.03 | 168 |
| March | 14,949 | 2,330 | 7 | 482 | 29,650 |
| April | 2,121 | 504 | 24 | 70.7 | 4,210 |
| May | 2,686 | 393 | 11 | 86.6 | 5,330 |
| June | 5,559 | 675 | 15 | 185 | 11,030 |
| July | 30,340 | 7,420 | 44 | 979 | 60,180 |
| August | 5,807 | 1,640 | 31 | 187 | 11,520 |
| September | 968 | 36 | 28 | 32.3 | 1,920 |
| Water year 1937-38 | 64,164.2 | 7,420 | 2.0 | 176 | 127,279 |
| **1938-39** | | | | | |
| October | 916 | 43 | 20 | 29.5 | 1,820 |
| November | 710 | 54 | 15 | 23.7 | 1,410 |
| December | 519 | 19 | 14 | 16.7 | 1,030 |
| January | 411 | 14 | 13 | 13.3 | 815 |
| February | 328 | 13 | 10 | 11.7 | 651 |
| March | 45,685 | 9,180 | 10 | 1,474 | 90,610 |
| April | 4,271 | 357 | 90 | 142 | 8,470 |
| May | 2,069 | 96 | 54 | 66.7 | 4,100 |
| June | 2,215 | 198 | 44 | 73.8 | 4,390 |
| July | 2,728 | 485 | 27 | 88.0 | 5,410 |
| August | 1,023 | 103 | 22 | 33.0 | 2,030 |
| September | 653 | 68 | 15 | 21.8 | 1,300 |
| Water year 1938-39 | 61,528 | 9,180 | 10 | 169 | 122,036 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1939-40** | | | | | |
| October | 553 | 21 | 16 | 17.8 | 1,100 |
| November | 612 | 26 | 13 | 20.4 | 1,210 |
| December | 719 | 34 | 16 | 23.2 | 1,430 |
| January | 275 | 15 | 6 | 8.9 | 545 |
| February | 241 | 11 | 7 | 8.3 | 478 |
| March | 765 | 69 | 12 | 24.7 | 1,520 |
| April | 2,348 | 272 | 42 | 78.3 | 4,660 |
| May | 2,698 | 675 | 20 | 87.0 | 5,350 |
| June | 437 | 20 | 9 | 14.6 | 867 |
| July | 3,788 | 1,090 | 9 | 122 | 7,510 |
| August | 674 | 182 | 6 | 21.7 | 1,340 |
| September | 229 | 14 | 5 | 7.6 | 454 |
| Water year 1939-40 | 13,339 | 1,090 | 5 | 36.4 | 26,464 |
| **1940-41** | | | | | |
| October | 686 | 124 | 11 | 22.1 | 1,360 |
| November | 360 | 14 | 8 | 12.0 | 714 |
| December | 340 | 13 | 9 | 11.0 | 674 |
| January | 228 | 9 | 6 | 7.4 | 452 |
| February | 168 | 6 | 6 | 6.0 | 333 |
| March | 7,414 | 660 | 6 | 239 | 14,710 |
| April | 3,426 | 600 | 33 | 114 | 6,800 |
| May | 2,821 | 504 | 21 | 91.0 | 5,600 |
| June | 26,036 | 3,920 | 68 | 868 | 51,640 |
| July | 882 | 58 | 14 | 28.5 | 1,750 |
| August | 684 | 72 | 14 | 22.1 | 1,360 |
| September | 1,721 | 152 | 15 | 57.4 | 3,410 |
| Water year 1940-41 | 44,766 | 3,920 | 6 | 123 | 88,803 |
| **1941-42** | | | | | |
| October | 1,507 | 90 | 22 | 48.6 | 2,990 |
| November | 615 | 24 | 18 | 20.5 | 1,220 |
| December | 464 | 22 | 11 | 15.0 | 920 |
| January | 339 | 12 | 10 | 10.9 | 672 |
| February | 331 | 13 | 11 | 11.8 | 657 |
| March | 13,259 | 1,370 | 12 | 428 | 26,300 |
| April | 12,181 | 2,740 | 73 | 406 | 24,160 |
| May | 2,952 | 266 | 42 | 95.2 | 5,860 |
| June | 14,930 | 2,880 | 41 | 498 | 29,610 |
| July | 2,182 | 236 | 28 | 70.4 | 4,330 |
| August | 1,349 | 178 | 18 | 43.5 | 2,680 |
| September | 753 | 39 | 17 | 25.1 | 1,490 |
| Water year 1941-42 | 50,862 | 2,880 | 10 | 139 | 100,889 |
| **1942-43** | | | | | |
| October | 707 | 33 | 19 | 22.8 | 1,400 |
| November | 601 | 33 | 6 | 20.0 | 1,190 |
| December | 218 | 10 | 5 | 7.0 | 432 |
| January | 209 | 16 | 4 | 6.7 | 415 |
| February | 9,415 | 2,040 | 7 | 336 | 18,670 |
| March | 66,155 | 11,000 | 70 | 2,134 | 131,200 |
| April | 23,961 | 4,600 | 98 | 799 | 47,530 |
| May | 2,932 | 164 | 60 | 94.6 | 5,820 |
| June | 13,639 | 1,500 | 62 | 455 | 27,050 |
| July | 5,364 | 450 | 92 | 173 | 10,640 |
| August | 2,566 | 377 | 43 | 82.8 | 5,090 |
| September | 1,427 | 124 | 19 | 47.6 | 2,820 |
| Water year 1942-43 | 127,194 | 11,000 | 4 | 348 | 252,257 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1943-44 | | | | | |
| October | 1,156 | 54 | 23 | 37.3 | 2,290 |
| November | 1,645 | 66 | 46 | 54.8 | 3,260 |
| December | 1,159 | 53 | 21 | 37.4 | 2,300 |
| January | 525 | 22 | 13 | 16.9 | 1,040 |
| February | 556 | 24 | 15 | 19.2 | 1,100 |
| March | 6,539 | 1,300 | 19 | 211 | 12,970 |
| April | 39,321 | 7,890 | 71 | 1,311 | 77,990 |
| May | 3,930 | 569 | 65 | 127 | 7,800 |
| June | 31,234 | 3,230 | 110 | 1,041 | 61,950 |
| July | 7,259 | 1,970 | 36 | 234 | 14,400 |
| August | 1,180 | 51 | 35 | 38.1 | 2,340 |
| September | 1,110 | 42 | 33 | 37 | 2,200 |
| Water year 1943-44 | 95,614 | 7,890 | 13 | 261 | 189,600 |

## HEART RIVER NEAR RICHARDTON, NORTH DAKOTA

Location: Lat. 46°45′, Long. 102° 18′, In NE¼, Section 29, Township 138 North, Range 92 West, 5th Principal Meridian.

Drainage Area: 1,250 Square Miles.

Note: This station is located at the bridge on State Highway Number 8, which is 300 feet above site of old bridge, and 1 mile above site of gage maintained in 1903-1922.

Records Available: May 1903 to March 1924, April to September 1944.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1902-03 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | ..... | ..... | ..... | ..... |
| May 18-31 | ..... | 2,504 | 13 | 611 | 16,969 |
| June | ..... | 118 | 5 | 22 | 1,309 |
| July | ..... | 13 | 0 | 4 | 246 |
| August | ..... | 530 | 0 | 18 | 1,107 |
| September | ..... | 336 | 8 | 67 | 3,987 |
| Water Year 1902-03 | ..... | 2,504 | 0 | ..... | 23,618 |
| 1903-04 | | | | | |
| October | ..... | 13 | 8 | 8 | 492 |
| November | ..... | 8 | 8 | 8 | 222 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 4,115 | 142 | 1,128 | 67,120 |
| May | ..... | 157 | 19 | 54.6 | 3,345 |
| June | ..... | 400 | 13 | 87.6 | 5,213 |
| July | ..... | 13 | .2 | 5.62 | 346 |
| August | ..... | 2 | .2 | .64 | 39 |
| September | ..... | 1 | .2 | .73 | 43 |
| Water Year 1903-04 | ..... | 4,115 | .2 | ..... | 76,820 |
| 1904-05 | | | | | |
| October | ..... | 4 | .2 | 2.14 | 132 |
| November | ..... | 4 | 2 | 3.07 | 183 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | 400 | 12 | 83.1 | 5,110 |
| April | ..... | 12 | 2 | 5.8 | 345 |
| May | ..... | 9 | 2 | 5.6 | 344 |
| June | ..... | 292 | 4 | 36.3 | 2,160 |
| July | ..... | 812 | 9 | 125 | 7,686 |
| August | ..... | 6 | .5 | 3.1 | 191 |
| September | ..... | 12 | 0 | 2.2 | 131 |
| Water Year 1904-05 | ..... | 812 | 0 | ..... | 15,938 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1905-06** | | | | | |
| October | ..... | 6 | .5 | 2.2 | 135 |
| November 1-23 | ..... | 9 | 4 | 6 | 274 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 26-31 | ..... | 812 | 311 | 503 | 5,990 |
| April | ..... | 695 | 11 | 100 | 5,950 |
| May | ..... | 1,830 | 11 | 276 | 17,000 |
| June | ..... | 8,020 | 27 | 1,090 | 64,900 |
| July | ..... | 33 | 11 | 24 | 1,480 |
| August | ..... | 33 | 11 | 19.2 | 1,180 |
| September | ..... | 16 | 4 | 8 | 476 |
| Water Year 1905-06 | ..... | 8,020 | .5 | ..... | 97,385 |
| **1906-07** | | | | | |
| October | ..... | 7 | 4 | 4.3 | 264 |
| November 1-16 | ..... | 11 | 7 | 8 | 254 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 18-31 | ..... | 2,350 | 311 | 1,060 | 29,400 |
| April | ..... | 228 | 21 | 82.2 | 4,890 |
| May | ..... | 33 | 11 | 16.2 | 996 |
| June | ..... | 182 | 11 | 20.7 | 1,230 |
| July | ..... | 651 | 2 | 156 | 9 590 |
| August | ..... | 33 | 2 | 9.3 | 573 |
| September | ..... | 7 | 1 | 2.6 | 153 |
| Water Year 1906-07 | ..... | 2,350 | 1 | ..... | 47,350 |
| **1907-08** | | | | | |
| October | ..... | 7 | 4 | 4.2 | 258 |
| November 1-9 | ..... | 4 | 4 | 4 | 71 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 19-31 | ..... | 384 | 98 | 208 | 5,360 |
| April | ..... | 244 | 21 | 94.2 | 5,610 |
| May | ..... | 1,120 | 11 | 156 | 9,590 |
| June | ..... | 442 | 27 | 112 | 6,660 |
| July | ..... | 48 | 7 | 14.3 | 879 |
| August | ..... | 21 | 1 | 4.1 | 252 |
| September | ..... | 4 | .3 | 1.26 | 75 |
| Water Year 1907-08 | ..... | 1,120 | .3 | ..... | 28,755 |
| **1908-09** | | | | | |
| October | ..... | 152 | 4 | 24 | 1,480 |
| November 1-27 | ..... | 21 | 4 | 8.5 | 455 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 260 | 21 | 86.6 | 5,160 |
| May | ..... | 960 | 11 | 160 | 9,840 |
| June | ..... | 3,920 | 27 | 578 | 34,400 |
| July | ..... | 1,420 | 27 | 257 | 15,800 |
| August | ..... | 2,350 | 16 | 401 | 24,700 |
| September | ..... | 37 | 7 | 17 | 1,010 |
| Water Year 1908-09 | ..... | 3,920 | 4 | ..... | 92,845 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1909-10** | | | | | |
| October | ..... | 11 | 4 | 7.8 | 480 |
| November | ..... | ..... | ..... | 14.4 | 857 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | 3 | 184 |
| February | ..... | ..... | ..... | 3 | 167 |
| March | ..... | 4,570 | ..... | 1,160 | 71,300 |
| April | ..... | 86 | 4 | 26.9 | 1,600 |
| May | ..... | 11 | 4 | 6.6 | 406 |
| June | ..... | 98 | 2 | 24.1 | 1,430 |
| July | ..... | 40 | 1 | 7.4 | 455 |
| August | ..... | 4 | .3 | .97 | 60 |
| September | ..... | 1 | .3 | .49 | 29 |
| Water Year 1909-10 | ..... | 4,570 | .3 | ..... | 76,968 |
| **1910-11** | | | | | |
| October | ..... | 1 | .3 | .89 | 55 |
| November | ..... | 4 | 1 | 3 | 179 |
| December | ..... | ..... | ..... | 2 | 123 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | ..... | ..... | ..... | ..... |
| May | ..... | ..... | ..... | ..... | ..... |
| June | ..... | ..... | ..... | ..... | ..... |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water Year 1910-11 | ..... | ..... | ..... | ..... | 357 |
| **1911-12** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | 3,960 | ..... | 440 | 27,100 |
| April | ..... | 3,520 | 125 | 1,060 | 63,100 |
| May | ..... | 2,650 | 42 | 343 | 21,100 |
| June | ..... | 424 | 26 | 128 | 7,620 |
| July | ..... | 2,064 | 24 | 242 | 14,900 |
| August | ..... | 211 | 19 | 34.7 | 2,140 |
| September | ..... | 30 | 18 | 19.2 | 1,140 |
| Water Year 1911-12 | ..... | 3,960 | 18 | ..... | 137,100 |
| **1912-13** | | | | | |
| October | ..... | 21 | 15 | 18.3 | 1,130 |
| November | ..... | 180 | ..... | 41.7 | 2,480 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 4,700 | 44 | 725 | 43,100 |
| May | ..... | 62 | 36 | 43.1 | 2,650 |
| June | ..... | 36 | 18 | 23.8 | 1,420 |
| July | ..... | 21 | 4 | 13.4 | 824 |
| August | ..... | 28 | 3 | 12.5 | 769 |
| September | ..... | 6 | 1 | 288 | 171 |
| Water Year 1912-13 | ..... | 4,700 | 1 | ..... | 52,544 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1913-14** | | | | | |
| October | ..... | 15 | 6 | 12 | 738 |
| November | ..... | 15 | 15 | 15 | 893 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 1,390 | ..... | 129 | 7,680 |
| May | ..... | 456 | 20 | 75.4 | 4,640 |
| June | ..... | 1,550 | 14 | 391 | 23,300 |
| July | ..... | 1,480 | ..... | 184 | 11,300 |
| August | ..... | 390 | ..... | 59.1 | 3,630 |
| September | ..... | ..... | ..... | 8. | 476 |
| Water Year 1913-14 | ..... | 1,550 | ..... | 108.8 | 52,657 |
| **1914-15** | | | | | |
| October | ..... | 20 | 8 | 13.1 | 807 |
| November 1-14 | ..... | 17 | 17 | 17 | 472 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | ..... | ..... | 52.2 | 3,090 |
| May | ..... | 102 | 14 | 34.8 | 2,140 |
| June | ..... | 1,820 | 36 | 246 | 14,600 |
| July | ..... | 125 | 28 | 60.3 | 3,700 |
| August | ..... | 188 | 6 | 41.7 | 2,560 |
| September | ..... | 20 | 5 | 8.7 | 516 |
| Water Year 1914-15 | ..... | 1,820 | 5 | 61.7 | 27,885 |
| **1915-16** | | | | | |
| October | ..... | 91 | 8 | 36.5 | 2,240 |
| November 1-20 | ..... | 24 | 11 | 20.2 | 801 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 2,470 | 241 | 952 | 56,600 |
| May | ..... | 256 | 45 | 97 | 5,960 |
| June | ..... | 1,070 | 17 | 127 | 7,560 |
| July | ..... | 138 | 2 | 50.7 | 3,120 |
| August | ..... | 55 | .6 | 7.28 | 448 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water Year 1915-16 | ..... | 2,470 | .6 | 189.6 | 76,729 |
| **1916-17** | | | | | |
| October | ..... | 28 | 17 | 22.4 | 1,380 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 1,850 | 256 | 814 | 48,400 |
| May | ..... | 226 | 41 | 85.9 | 5,280 |
| June | ..... | 65 | 17 | 35.1 | 2,090 |
| July | ..... | 28 | 2.5 | 10.9 | 670 |
| August | ..... | 2.5 | .4 | .90 | 55 |
| September | ..... | 2.5 | .6 | 1.54 | 92 |
| Water Year 1916-17 | ..... | 1.850 | .4 | 136.6 | 57,967 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Runoff in Acre-Feet |
|---|---|---|---|---|---|
| **1917-18** | | | | | |
| October | ..... | 4 | 1 | 2.63 | 162 |
| November | ..... | 7 | 2.5 | 4.48 | 267 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 19-31 | ..... | 1,490 | 80 | 576 | 14,900 |
| April | ..... | 351 | 21 | 69.7 | 4,150 |
| May | ..... | 34 | 9 | 17 | 1,050 |
| June | ..... | 43 | 2 | 15.2 | 904 |
| July | ..... | 12 | 2 | 5.27 | 324 |
| August | ..... | 1,620 | 3 | 172 | 10,600 |
| September | ..... | 9 | 1.2 | 3.75 | 82 |
| Water Year 1917-18 | ..... | 1,620 | 1 | 63.6 | 32,439 |
| **1918-19** | | | | | |
| October | ..... | 17 | 6 | 10.4 | 640 |
| November 1-23 | ..... | 32 | 11 | 16.2 | 739 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 966 | .2 | 159 | 9,460 |
| May | ..... | 109 | 7 | 41.7 | 2,560 |
| June | ..... | 14 | 1.6 | 6.48 | 386 |
| July | ..... | 1.4 | 0 | .40 | 25 |
| August | ..... | 11 | 0 | 1.25 | 77 |
| September | ..... | .2 | 0 | .07 | 4 |
| Water Year 1918-19 | ..... | 966 | 0 | 29.6 | 13,891 |
| **1919-20** | | | | | |
| October | ..... | 2.4 | .1 | .85 | 52 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 12-31 | ..... | 1,500 | 17 | 605 | 24,000 |
| April | ..... | 1,130 | 52 | 256 | 15,200 |
| May | ..... | 60 | 6 | 22.9 | 1,410 |
| June | ..... | 690 | 6 | 96.4 | 5,740 |
| July | ..... | 575 | 8 | 139 | 8,550 |
| August | ..... | 6 | .6 | 1.70 | 105 |
| September | ..... | 10 | 1 | 1.94 | 115 |
| Water Year 1919-20 | ..... | 1,500 | .1 | 118.9 | 55,172 |
| **1920-21** | | | | | |
| October | ..... | 17 | 1.4 | 2.97 | 183 |
| November | ..... | 6 | 1.4 | 3.72 | 221 |
| December | ..... | ..... | ..... | 2.16 | 133 |
| January | ..... | ..... | ..... | .7 | 43 |
| February | ..... | ..... | ..... | .6 | 33 |
| March | ..... | 170 | .2 | 39.9 | 2,450 |
| April | ..... | 32 | 11 | 18.4 | 1,090 |
| May | ..... | 36 | 6 | 10.3 | 633 |
| June | ..... | 714 | 1.8 | 65.7 | 3,910 |
| July | ..... | 103 | 1.8 | 19.9 | 1,220 |
| August | ..... | 110 | .1 | 5.65 | 347 |
| September | ..... | 28 | 2.6 | 7.77 | 462 |
| Water Year 1920-21 | ..... | 714 | .1 | 14.8 | 10,725 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1921-22 | | | | | |
| October | ..... | 4.6 | 1.4 | 2.6 | 160 |
| November 1-10 | ..... | 3.3 | 3.3 | 3.3 | 66 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 21-30 | ..... | 410 | 14 | 127 | 2,770 |
| April | ..... | 1,470 | 24 | 280 | 16,700 |
| May | ..... | 203 | 8 | 43.5 | 2,670 |
| June | ..... | 1,290 | 8 | 404 | 24,000 |
| July | ..... | 450 | 16 | 80.8 | 4,970 |
| August | ..... | 1,380 | 2.2 | 73.2 | 4,500 |
| September | ..... | 2.2 | .8 | 1.57 | 93 |
| Water Year 1921-22 | ..... | 1,470 | .8 | 120.5 | 55,929 |

| Month | Run-off In Acre Feet | |
|---|---|---|
| | 1922-23 | 1923-24 |
| October | 191 | 10,700 |
| November | 1,250 | 910 |
| December | 184 | 430 |
| January | 307 | 170 |
| February | 444 | 179 |
| March | 17,000 | 4,200 |
| April | 29,800 | |
| May | 4,940 | |
| June | 9,380 | |
| July | 12,000 | |
| August | 6,980 | |
| September | 11,500 | |
| Water Year | 94,000 | 7,589 |

Note: End of Record until 1942-43.

| | | | | | |
|---|---|---|---|---|---|
| 1942-43 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 14-30 | 1,213 | 117 | 40 | 71.4 | 2,410 |
| May | 1,375 | 108 | 33 | 44.4 | 2,730 |
| June | 5,945 | 1,220 | 26 | 198 | 11,790 |
| July | 1,453 | 230 | 14 | 46.9 | 2,880 |
| August | 853 | 121 | 8 | 27.5 | 1,090 |
| September | 387 | 53 | 4 | 12.9 | 768 |
| Water Year 1942-43 | ..... | ..... | ..... | ..... | 22,270 |
| 1943-1944 | | | | | |
| October | 238 | 17 | 5 | 7.7 | 472 |
| November | 379.3 | 21 | 1 | 12.6 | 752 |
| December | 273.2 | 14 | 1.8 | 8.81 | 542 |
| January | 148.2 | 8 | 3.2 | 4.78 | 294 |
| February | 129 | 5 | 3 | 4.4 | 256 |
| March | 5,075 | 1,500 | 4 | 164 | 10,070 |
| April | 20,355 | 3,340 | 34 | 678 | 40,330 |
| May | 1,500 | 175 | 28 | 48.4 | 2,980 |
| June | 28,175 | 3,580 | 42 | 939 | 55,880 |
| July | 3,698 | 750 | 19 | 119 | 7,330 |
| August | 635 | 26 | 17 | 20.5 | 1,260 |
| September | 535 | 42 | 12 | 17.8 | 1,060 |
| Water year 1943-44 | 61,120.7 | 3,580 | 1 | 167 | 121,200 |

## HEART RIVER NEAR GLEN ULLIN, NORTH DAKOTA

Location: Lat. 46°36′32″, long. 101°51′25″, NE¼SW¼ sec. 10, T. 136 N., R. 89 W., at county highway bridge, 9 miles downstream from Coal Creek, 14 miles upstream from Heart Butte Creek, 14 miles north of Elgin and 15 miles south of Glen Ullin.

Drainage area: 1,750 square miles.

Records available: April 1943 to September 1944.

Extremes: Maximum gage height 18.77 feet Mar. 25, 1943.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1942-43 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 13-30 | 2,162 | 221 | 74 | 120 | 4,290 |
| May | 1,977 | 98 | 42 | 63.8 | 3,920 |
| June | 8,595 | 1,240 | 60 | 286 | 17,050 |
| July | 2 128 | 160 | 24 | 68.6 | 4,220 |
| August | 1,031 | 99 | 15 | 33.3 | 2,040 |
| September | 607 | 50 | 8 | 20.2 | 1,200 |
| Water year 1942-43 | ..... | ..... | ..... | ..... | 32,720 |
| 1943-44 | | | | | |
| October | 337 | 18 | 8 | 10.9 | 668 |
| November | 495 | 26 | 7 | 16.5 | 982 |
| December | 326 | 20 | 6 | 10.5 | 647 |
| January | 223 | 8 | 6 | 7.2 | 442 |
| February | 177 | 7 | 5 | 6.1 | 351 |
| March | 2,215 | 800 | 6 | 71.5 | 4,390 |
| April | 31,820 | 5,520 | 43 | 1,061 | 63,110 |
| May | 3,511 | 1,030 | 22 | 113 | 6,960 |
| June | 32,100 | 3,040 | 152 | 1,070 | 63,670 |
| July | 7,408 | 1,760 | 23 | 239 | 14,090 |
| August | 617 | 26 | 17 | 19.9 | 1,220 |
| September | 905 | 75 | 18 | 30.2 | 1,800 |
| Water year 1943-44 | 80,134 | 5,520 | 5 | 219 | 158,900 |

## HEART RIVER AT LEHIGH, NORTH DAKOTA

Location: Lat. 46°52′, long. 102° 43′, in NE¼ sec. 7 T. 139 N. R. 95 W. at county highway bridge in Lehigh, Stark County, 150 feet downstream from N. P. Ry. bridge, and about 10 miles upstream from Green River.

Drainage Area: 453 square miles.

Records Available: No records were collected at or near this site prior to March, 1943.

Extremes: Maximum stage known, 17.8 feet Mar. 25, 1943, minimum gage height about 3 feet.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1942-43 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 25-31 | 19,540 | 5,210 | 1,280 | 2,791 | 38,760 |
| April | 2,223 | 575 | 12 | 74.1 | 4,410 |
| May | 384 | 25 | 6 | 12.4 | 762 |
| June | 1,893 | 409 | 6 | 63.1 | 3,750 |
| July | 419.4 | 85 | 2.0 | 13.5 | 832 |
| August | 180.9 | 24 | 1.9 | 5.84 | 359 |
| September | 92.3 | 9 | 2.3 | 3.08 | 183 |
| Tot. water yr. 1942-43 | 24,732.6 | ..... | ..... | ..... | 49,056 |
| 1943-44 | | | | | |
| October | 104.4 | 8 | 2.3 | 3.37 | 207 |
| November | 130.8 | 9 | 3 | 4.36 | 259 |
| December | 83 | 4 | 2 | 2.7 | 165 |
| January | 56 | 3 | 1 | 1.8 | 111 |
| February | 13 | 1 | 0 | .4 | 26 |
| March | 1,337 | 200 | 0 | 43.1 | 2,650 |
| April | 5,880 | 1,070 | 9 | 196 | 11,660 |
| May | 316.9 | 36 | 3.9 | 10.2 | 629 |
| June | 9,507 | 1,380 | 6 | 317 | 18,860 |
| July | 1,592 | 291 | 3 | 51.4 | 3,160 |
| August | 98 | 5 | 1 | 3.2 | 194 |
| September | 114 | 15 | 0 | 3.8 | 226 |
| Water year 1943-44 | 19,232.1 | 1,380 | 0 | 52.5 | 38,150 |

## HEART RIVER NEAR MANDAN, NORTH DAKOTA
**(Formerly published as Sunny, N. Dak.)**

Location: Wire-Weight Gage, Lat. 46°50′, Long. 100°59′, in NE¼NW¼ Sec. 25 T. 139N. R. 82W, at county highway bridge 300 feet downstream from N. P. Railway bridge, 3 miles west of Mandan, and 4 miles downstream from Sweetbriar Creek.

Drainage Area: 3,362 Square Miles.

Records Available: April to September 1924, March 1928 to June 1933, October 1937 to September 1944.

Extremes: Maximum Discharge 21,400 second-feet March 27, 1943.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1923-24** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 2,060 | 140 | 494 | 24,500 |
| May | ..... | 293 | 49 | 131 | 8,060 |
| June | ..... | 2,530 | 36 | 586 | 34,900 |
| July | ..... | 1,200 | 83 | 275 | 16,900 |
| August | ..... | 104 | 5 | 34.7 | 2,130 |
| September | ..... | 9 | 2 | 5.1 | 304 |
| Water year 1923-24 | ..... | ..... | ..... | ..... | 86,800 |
| **1927-28** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 26-31 | 4,390 | 1,380 | 368 | 732 | 8,710 |
| April | 5,290 | 318 | 77 | 176 | 10,500 |
| May | 1,803 | 168 | 24 | 58.2 | 3,580 |
| June | 2,605 | 368 | 8 | 86.8 | 5,160 |
| July | 19,954 | 1,610 | 158 | 64.4 | 39,600 |
| August | 8,176 | 1,550 | 54 | 264 | 16,200 |
| September | 1,484 | 137 | 8 | 49.5 | 2,950 |
| Water year 1927-28 | 43,702 | 1,610 | ..... | ..... | 86,700 |
| **1928-29** | | | | | |
| October | 432 | 32 | 4 | 13.9 | 855 |
| November | 1,042 | 58 | 16 | 34.7 | 2,060 |
| December | 775 | ..... | ..... | 25 | 1,540 |
| January | 310 | ..... | ..... | 10 | 615 |
| February | 340 | ..... | ..... | 12.1 | 672 |
| March | 23,020 | 2,510 | ..... | 743 | 45,700 |
| April | 12,752 | 2,330 | 103 | 425 | 25,300 |
| May | 3,702 | 1,180 | 56 | 119 | 7,320 |
| June | 22,134 | 2,690 | 96 | 738 | 43,900 |
| July | 1,278 | 88 | 10 | 41.2 | 2,530 |
| August | 310.6 | 27 | 0 | 10 | 615 |
| September | 207.2 | 16 | 2.1 | 6.91 | 411 |
| Water year 1928-29 | 66,303 | 2,690 | 0 | 182 | 131,518 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1929-30** | | | | | |
| October | 236 | 14 | 3 | 7.61 | 468 |
| November | 300 | 18 | 12 | 15 | 595 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 21-31 | 19,162 | 3,240 | 662 | 1,740 | 38,000 |
| April | 13,598 | 990 | 137 | 453 | 27,000 |
| May | 3,910 | 198 | 62 | 126 | 7,750 |
| June | 13,008 | 2,540 | 52 | 434 | 25,800 |
| July | 1,921 | 209 | 17 | 62 | 3,810 |
| August | 306 | 17 | 2 | 9.87 | 607 |
| September | 339 | 19 | 7 | 11.3 | 672 |
| Water year 1929-30 | 52,780 | 3,240 | ..... | ..... | 104,702 |
| **1930-31** | | | | | |
| October | 568 | 28 | 10 | 18.3 | 1,130 |
| November | 530 | 22 | 16 | 17.7 | 1,050 |
| December | 380 | ..... | ..... | 12.3 | 756 |
| January | 610 | ..... | ..... | 19.7 | 1,210 |
| February | 3,325 | ..... | ..... | 119 | 6,610 |
| March | 2,969 | 198 | ..... | 95.8 | 5,890 |
| April | 2,362 | 177 | 22 | 78.7 | 4,680 |
| May | 636 | 39 | 12 | 20.5 | 1,260 |
| June | 1,209 | 209 | 12 | 40.3 | 2,400 |
| July | 1,668.5 | 167 | 9.5 | 53.8 | 3,310 |
| August | 947.5 | 56 | 9.5 | 30.6 | 1,880 |
| September | 759.4 | 120 | 1.3 | 25.3 | 1,510 |
| Water year 1930-31 | 15,964.4 | 209 | 1.3 | 43.7 | 31,686 |
| **1931-32** | | | | | |
| October | 1,418 | 157 | 20 | 45.7 | 2,810 |
| November | 561 | 20 | ..... | 18.7 | 1,110 |
| December | 492 | 20 | 11 | 15.9 | 978 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 17,023 | 2,250 | 164 | 549 | 33,800 |
| April | 4,619 | 618 | 62 | 154 | 9,160 |
| May | 1,842.8 | 98 | 7.8 | 59.4 | 3,650 |
| June | 11,310 | 1,240 | 43 | 377 | 22,400 |
| July | 1,218 | 76 | 9 | 39.3 | 2,420 |
| August | 113.2 | 8.4 | 0 | 3.65 | 224 |
| September | 42.9 | 2.8 | ..... | 1.43 | 85 |
| Water year 1931-32 | 38,639.9 | ..... | ..... | ..... | 76,637 |
| **1932-33** | | | | | |
| October | 732 | 32 | 14 | 23.6 | 1,450 |
| November | 444.5 | 32 | ..... | 14.8 | 881 |
| December | 728 | ..... | ..... | 23.4 | 1,440 |
| January | 147.5 | ..... | 0 | 4.92 | 303 |
| February | 248.5 | 146 | 0 | 8.83 | 490 |
| March | 49,908 | 2,530 | 524 | 1,610 | 99,000 |
| April | 8,040 | 1,020 | 118 | 268 | 15,900 |
| May | 10,552 | 2,460 | 72 | 340 | 20,900 |
| June | 2,672 | 331 | 13 | 88.4 | 5,260 |
| July, Discontinued | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1932-33 | 73,460.5 | ..... | ..... | ..... | 146,000 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1937-38** | | | | | |
| October | 239 | 13 | 2 | 7.71 | 474 |
| November | 208.5 | 14 | 2 | 6.95 | 414 |
| December | 6.4 | 1.6 | 0 | .21 | 13 |
| January | 0 | 0 | 0 | 0 | 0 |
| February | 27 | 25 | 0 | .96 | 54 |
| March | 21,985.5 | 3,000 | 2 | 709 | 43,610 |
| April | 2,390 | 135 | 50 | 79.7 | 4,740 |
| May | 1,548 | 95 | 35 | 49.9 | 3,070 |
| June | 7,425 | 1,700 | 21 | 248 | 14,730 |
| July | 52,556 | 9,010 | 114 | 1,695 | 104,200 |
| August | 1,989 | 114 | 32 | 64.2 | 3,950 |
| September | 715 | 47 | 9 | 23.8 | 1,420 |
| Water year 1937-38 | 89,089.4 | 9,010 | 0 | 244 | 176,700 |
| **1938-39** | | | | | |
| October | 365 | 18 | 9 | 11.8 | 724 |
| November | 277.4 | 22 | 2 | 9.25 | 550 |
| December | 378 | 22 | 8 | 12.2 | 750 |
| January | 166.2 | 8 | 1 | 5.36 | 330 |
| February | .6 | .4 | 0 | .02 | 1.2 |
| March | 55,677 | 10,600 | 0 | 1,796 | 110,400 |
| April | 5,343 | 722 | 78 | 178 | 10,600 |
| May | 1,563 | 78 | 29 | 50.4 | 3,100 |
| June | 1,963 | 132 | 42 | 65.4 | 3,890 |
| July | 3,130 | 268 | 22 | 101 | 6,210 |
| August | 422 | 22 | 8 | 13.6 | 837 |
| September | 300.1 | 108 | 1.8 | 10.0 | 595 |
| Water year 1938-39 | 69,585.3 | 10,600 | 0 | 191 | 138,000 |
| **1939-40** | | | | | |
| October | 167.6 | 8 | 3 | 5.41 | 332 |
| November | 276 | 15 | 4 | 9.2 | 547 |
| December | 351 | 18 | 7 | 11.3 | 696 |
| January | 32 | 5 | 0 | 1 | 63 |
| February | 0 | 0 | 0 | 0 | 0 |
| March | 731 | 93 | 0 | 23.6 | 1,450 |
| April | 6,862 | 1,220 | 50 | 229 | 13,610 |
| May | 14,404 | 3,500 | 47 | 465 | 28,570 |
| June | 718 | 43 | 8 | 23.9 | 1,420 |
| July | 2,131.6 | 722 | 2.4 | 68.8 | 4,230 |
| August | 1,217.3 | 355 | 3 | 39.3 | 2,410 |
| September | 70.2 | 10 | .7 | 2.34 | 139 |
| Water year 1939-40 | 26,960.7 | 3,500 | 0 | 73.7 | 53,467 |
| **1940-41** | | | | | |
| October | 418.3 | 35 | 2 | 13.5 | 830 |
| November | 221 | 13 | 5 | 7.4 | 438 |
| December | 69 | 4 | 1 | 2.2 | 137 |
| January | 16 | 1 | 0 | 0.5 | 32 |
| February | 0 | 0 | 0 | 0 | 0 |
| March | 13,915 | 3,000 | 0 | 449 | 27,600 |
| April | 5,408 | 962 | 66 | 180 | 10,730 |
| May | 5,129 | 2,300 | 32 | 165 | 10,170 |
| June | 57,745 | 6,940 | 166 | 1,920 | 114,500 |
| July | 2,705 | 158 | 33 | 87.3 | 5,370 |
| August | 1,286 | 260 | 17 | 41.5 | 2,550 |
| September | 1,505 | 85 | 13 | 50.2 | 2,990 |
| Water year 1940-41 | 88,417.3 | 6,940 | 0 | 242 | 175,347 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Runoff in Acre-Feet |
|---|---|---|---|---|---|
| **1941-42** | | | | | |
| October | 2,183 | 184 | 38 | 70.4 | 4,330 |
| November | 932 | 45 | 21 | 31.1 | 1,850 |
| December | 419 | 21 | 8 | 13.5 | 831 |
| January | 68 | 8 | 1 | 2.2 | 135 |
| February | 66 | 3 | 2 | 2.4 | 131 |
| March | 8,130 | 945 | 2 | 262 | 16,130 |
| April | 18,077 | 2,680 | 166 | 603 | 35,860 |
| May | 11,300 | 995 | 166 | 365 | 22,410 |
| June | 16,429 | 3,250 | 118 | 548 | 32,590 |
| July | 3,947 | 365 | 62 | 127 | 7,830 |
| August | 1,459 | 71 | 28 | 47.1 | 2,890 |
| September | 983 | 41 | 24 | 32.8 | 1,950 |
| Water year 1941-42 | 63,993 | 3,250 | 1 | 175 | 126,937 |
| **1942-43** | | | | | |
| October | 935 | 42 | 23 | 30.2 | 1,850 |
| November | 813 | 39 | 8 | 27.1 | 1,610 |
| December | 92 | 6 | 2 | 3.0 | 182 |
| January | 51 | 2 | 1 | 1.6 | 101 |
| February | 20,240 | 4,000 | 2 | 723 | 40,150 |
| March | 123,590 | 21,200 | 100 | 3,987 | 245,100 |
| April | 48,808 | 12,400 | 220 | 1,627 | 96,810 |
| May | 5,307 | 220 | 131 | 171 | 10,530 |
| June | 19,423 | 1,660 | 160 | 647 | 38,520 |
| July | 4,639 | 220 | 86 | 150 | 9,200 |
| August | 2,443 | 156 | 52 | 78.8 | 4,850 |
| September | 1,788 | 104 | 39 | 59.6 | 3,550 |
| Water year 1942-43 | 228,129 | 21,200 | 1 | 625 | 452,453 |

NOTE: Highway bridge destroyed March 27, 1943. On April 9, 1943, gage was installed at Northern Pacific Railway bridge in NE¼NW¼ Section 25, Township 139 N., Range 82 W., 3 miles west of Mandan, Morton County, and 4 miles downstream from Sweetbriar Creek.

| | | | | | |
|---|---|---|---|---|---|
| **1942-43** | | | | | |
| October | 1,055 | 55 | 27 | 34 | 2,090 |
| November | 1,857 | 74 | 40 | 61.9 | 3,680 |
| December | 669 | 40 | 10 | 21.6 | 1,330 |
| January | 257 | 15 | 5 | 8.3 | 510 |
| February | 242 | 14 | 4 | 8.3 | 480 |
| March | 2,897 | 500 | 9 | 93.5 | 5,750 |
| April | 55,007 | 8,000 | 148 | 1,843 | 109,100 |
| May | 8,338 | 2,130 | 103 | 269 | 16,540 |
| June | 43,682 | 4,070 | 148 | 1,456 | 86,640 |
| July | 14,973 | 3,250 | 77 | 483 | 29,700 |
| August | 1,642 | 73 | 41 | 53 | 3,260 |
| September | 1,774 | 155 | 40 | 59.1 | 3,520 |
| Water year 1943-44 | 132,393 | 8,000 | 4 | 362 | 262,600 |

## CANNONBALL RIVER NEAR NEW LEIPZIG, NORTH DAKOTA

Location: Lateral 46°20′, Longitude 101° 57′, in SW¼ Section 11, Township 133 North, Range 90 W., at bridge on county highway 2½ miles south of New Leipzig, Grant County, and 8 miles downstream from Thirtymile Creek.

Drainage Area: 1,260 Square Miles.

Records Available: April 1943 to September 1944.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1942-43 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 13-30 | 1,104 | 113 | 36 | 61.3 | 2,190 |
| May | 836 | 50 | 12 | 27.0 | 1,660 |
| June | 2,777 | 251 | 17 | 92.6 | 5,510 |
| July | 8,377 | 1,570 | 8 | 270 | 16,620 |
| August | 154.4 | 24 | .6 | 4.98 | 306 |
| September | 105.5 | 24 | .4 | 3.52 | 209 |
| Water year 1942-43 | 13,353.9 | ..... | ..... | ..... | 26,495 |
| 1943-44 | | | | | |
| October | 118.5 | 8 | 1.7 | 3.82 | 235 |
| November | 168.5 | 9 | 3.6 | 5.62 | 334 |
| December | 116.5 | 6 | 2 | 3.76 | 231 |
| January | 62 | 3 | 1 | 2 | 123 |
| February | 39 | 2 | 1 | 1.3 | 77 |
| March | 133 | 13 | 2 | 4.3 | 264 |
| April | 29,027 | 5,700 | 25 | 968 | 57,570 |
| May | 904 | 54 | 17 | 29.2 | 1,790 |
| June | 18,188 | 2,590 | 13 | 606 | 36,080 |
| July | 2,788 | 589 | 19 | 89.9 | 5,530 |
| August | 551 | 24 | 14 | 17.8 | 1,090 |
| September | 348 | 15 | 9 | 11.6 | 690 |
| Water year 1943-44 | 52,443.5 | 5,700 | 1 | 143 | 104,000 |

## CANNONBALL RIVER AT STEVENSON

Note: Name changed in 1928 from Stevenson to Timmer, North Dakota.

Location: In NW¼ of Section 21, Township 133 N., Range 82 W., on the F. S. Bingenheimer ranch 3¼ miles south of Timmer, North Dakota.

Drainage Area: 3,650 square miles.

Records available: June 1903 to September 1918, October 1921 to September 1934.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1902-03 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | ..... | ..... | ..... | ..... |
| May | ..... | ..... | ..... | ..... | ..... |
| June 10-30 | ..... | 62 | 14 | 33.2 | 1,380 |
| July | ..... | 104 | 4 | 25 | 1,540 |
| August | ..... | 1,930 | 12 | 331 | 2,400 |
| September | ..... | 1,010 | 4 | 1.89 | 11,200 |
| Water Year 1902-03 | ..... | 1,930 | ..... | ..... | 16,520 |
| 1903-04 | | | | | |
| October | ..... | 50 | 9 | 21.5 | 1,320 |
| November 1-21 | ..... | 92 | 9 | 29.5 | 1,230 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 6-30 | ..... | 3,000 | 153 | 849 | 42,100 |
| May | ..... | 153 | 38 | 84.5 | 5,200 |
| June | ..... | 1,930 | 50 | 552 | 32,800 |
| July | ..... | 130 | 5 | 36.2 | 2,240 |
| August | ..... | 24 | 0 | 4.7 | 289 |
| September | ..... | 9 | 0 | 3.4 | 202 |
| Water Year 1903-04 | ..... | 3,000 | 0 | 178.8 | 85,381 |
| 1904-05 | | | | | |
| October | ..... | 85 | 1.1 | 15.2 | 935 |
| November 1-29 | ..... | 24 | 3 | 11 | 633 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | 2,000 | 86 | 584 | 35,900 |
| April | ..... | 152 | 5 | 46.9 | 2,790 |
| May | ..... | 1,080 | 4 | 231 | 14,200 |
| June | ..... | 2,300 | 3 | 324 | 19,300 |
| July | ..... | 810 | 16 | 304 | 18,700 |
| August | ..... | 236 | 3 | 75 | 4,610 |
| September | ..... | 24 | 0 | 6.1 | 363 |
| Water Year 1904-05 | ..... | 2,300 | 0 | 182.4 | 97,431 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1905-06** | | | | | |
| October | ..... | 24 | 0 | 6.9 | 424 |
| November 1-25 | ..... | 55 | 9 | 27.8 | 1,380 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 3-30 | ..... | 1,010 | 43 | 236 | 12,600 |
| May | ..... | 2,800 | 24 | 656 | 40,300 |
| June | ..... | 5,900 | 55 | 2,300 | 137,000 |
| July | ..... | 178 | 2 | 51.6 | 3,170 |
| August | ..... | 128 | 5 | 46 | 2,830 |
| September | ..... | 69 | 9 | 37.7 | 2,240 |
| Water Year 1905-06 | ..... | 5,900 | 0 | 426.3 | 199,944 |
| **1906-07** | | | | | |
| October | ..... | 55 | 0 | 12.3 | 756 |
| November 1-24 | ..... | 55 | 0 | 13.4 | 638 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | 2,380 | 534 | 1,380 | 21,900 |
| April | ..... | 1,200 | 33 | 264 | 15,700 |
| May | ..... | 693 | 24 | 124 | 7,620 |
| June | ..... | 3,450 | 44 | 655 | 39,000 |
| July | ..... | 1,130 | 44 | 261 | 16,000 |
| August | ..... | 58 | ..... | 13.7 | 842 |
| September | ..... | 3 | ..... | .47 | 28 |
| Water Year 1906-07 | ..... | 3,450 | 0 | 185.7 | 102,484 |
| **1907-08** | | | | | |
| October | ..... | 3 | ..... | .52 | 32 |
| November | ..... | 24 | ..... | 3 | 179 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | 4,000 | 115 | 1,060 | 44,100 |
| April | ..... | 1,060 | 115 | 358 | 21,300 |
| May | ..... | 1,890 | 115 | 569 | 35,000 |
| June | ..... | 2,640 | 33 | 1,210 | 73,000 |
| July | ..... | 638 | 3 | 143 | 8,790 |
| August | ..... | 33 | 0 | 5.45 | 335 |
| September | ..... | 4 | 0 | 1.72 | 102 |
| Water Year 1907-08 | ..... | 4,000 | 0 | 378.9 | 181,838 |
| **1908-09** | | | | | |
| October | ..... | 372 | 0 | 40.4 | 2,480 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | ..... | ..... | ..... | ..... |
| May | ..... | ..... | ..... | ..... | ..... |
| June | ..... | ..... | ..... | ..... | ..... |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water Year 1908-09 | ..... | 372 | 0 | 40.4 | 2,480 |

1909-10—No Record.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1910-11** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 22-31 | ..... | ..... | ..... | 59.2 | 1,174 |
| April 1-3 | ..... | ..... | ..... | 43 | 256 |
| May | ..... | ..... | ..... | ..... | ..... |
| June | ..... | ..... | ..... | ..... | ..... |
| July | ..... | ..... | ..... | ..... | ..... |
| August 9-31 | ..... | 150 | 2.5 | 26.4 | 1,204 |
| September | ..... | 74 | 2 | 10.5 | 625 |
| Water Year 1910-11 | ..... | ..... | ..... | ..... | 3,259 |
| **1911-12** | | | | | |
| October 1-25 27-31 | ..... | 36 | 2 | 5.4 | 318 |
| November 1-21 | ..... | 13 | 3 | 6.1 | 254 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | 3,900 | 7 | 529 | 32,500 |
| April | ..... | 6,360 | 212 | 1,220 | 72,600 |
| May | ..... | 467 | 83 | 157 | 9,650 |
| June | ..... | 241 | 56 | 108 | 6,430 |
| July | ..... | 3,820 | 45 | 486 | 29,900 |
| August | ..... | 76 | 22 | 43.5 | 2,600 |
| September | ..... | 44 | 10 | 29.1 | 1,730 |
| Water Year 1911-12 | ..... | ..... | ..... | ..... | 156,040 |
| **1912-13** | | | | | |
| October | ..... | 30 | 10 | 20 | 1,230 |
| November | ..... | 30 | 9 | 18.3 | 1,090 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | 1,690 | 7 | 133 | 8,180 |
| April | ..... | 3,820 | 56 | 887 | 52,800 |
| May | ..... | 305 | 39 | 101 | 6,210 |
| June | ..... | 148 | 5 | 40.7 | 2,420 |
| July | ..... | 69 | 2 | 23.2 | 1,430 |
| August | ..... | 15 | .4 | 3.06 | 188 |
| September | ..... | 7 | .2 | .99 | 59 |
| Water Year 1912-13 | ..... | 3,820 | .2 | ..... | 73,607 |
| **1913-14** | | | | | |
| October | ..... | 19 | .3 | 4.08 | 251 |
| November | ..... | 4 | .3 | 1.43 | 85 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 276 | 32 | 83.7 | 4,980 |
| May | ..... | 590 | 28 | 87.3 | 5,370 |
| June | ..... | 4,680 | 28 | 987 | 58,700 |
| July | ..... | 1,030 | 17 | 217 | 13,300 |
| August | ..... | 90 | 17 | 40.3 | 2,480 |
| September | ..... | 37 | 2 | 25.6 | 1,520 |
| Water Year 1913-14 | ..... | 4,680 | .3 | 179 | 86,686 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1914-15** | | | | | |
| October | ..... | 37 | 2 | 13 | 799 |
| November | ..... | 14 | 2 | 18.1 | 482 |
| December 1-18 | ..... | 9 | 2 | 5.8 | 207 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 462 | ..... | 96.4 | 5,730 |
| May | ..... | ..... | ..... | 250 | 15,400 |
| June | ..... | ..... | ..... | 1,600 | 95,200 |
| July | ..... | ..... | ..... | 600 | 36,900 |
| August | ..... | ..... | ..... | 450 | 27,700 |
| September | ..... | 120 | 42 | 73.2 | 4,360 |
| Water Year 1914-15 | ..... | ..... | ..... | 359.4 | 186,778 |
| **1915-16** | | | | | |
| October | ..... | 1,590 | 47 | 160 | 9,840 |
| November 1-10 | ..... | 47 | 34 | 43.1 | 855 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 3,900 | 535 | 1,840 | 109,000 |
| May | ..... | 1.450 | 147 | 297 | 18,300 |
| June | ..... | 175 | 80 | 114 | 6,780 |
| July | ..... | 240 | 23 | 67.3 | 4,140 |
| August | ..... | 122 | 14 | 36.1 | 2,220 |
| September | ..... | 240 | 8 | 27 | 1,610 |
| Water Year 1915-16 | ..... | 3,900 | 8 | 343.8 | 152,745 |
| **1916-17** | | | | | |
| October | ..... | 14 | 8 | 10.1 | 623 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 1,880 | 350 | 974 | 58,000 |
| May | ..... | 302 | 71 | 134 | 8,240 |
| June | ..... | 134 | 47 | 72.9 | 4,340 |
| July | ..... | 47 | 4 | 18.1 | 1,110 |
| August | ..... | 8 | 2 | 2.77 | 170 |
| September | ..... | 23 | 2 | 3.48 | 207 |
| Water Year 1916-17 | ..... | 1,880 | 2 | 171.3 | 72,690 |
| **1917-18** | | | | | |
| October | ..... | 5 | 1.5 | 2.47 | 152 |
| November | ..... | 14 | 5 | 8.45 | 503 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 13-31 | ..... | 3,500 | 122 | 1,440 | 54,300 |
| April | ..... | 452 | 111 | 193 | 11,500 |
| May | ..... | 142 | 40 | 77.5 | 4,770 |
| June | ..... | 153 | 37 | 60 | 3,570 |
| July | ..... | 24 | 5 | 13.6 | 836 |
| August | ..... | 316 | 1.6 | 14 | 861 |
| September | ..... | 1.6 | 1.1 | 1.27 | 76 |
| Water Year 1917-18 | ..... | 3,500 | 1.1 | 146.2 | 76,568 |

1919-20—No Record.

| Month | Second Foot Days | Maximum | Minimum | Mean | Runoff in Acre-Feet |
|---|---|---|---|---|---|
| **1921-22** | | | | | |
| October | ..... | 94 | 4 | 12.8 | 787 |
| November | ..... | 14 | ..... | 6 | 357 |
| December | ..... | ..... | ..... | 5 | 307 |
| January | ..... | ..... | ..... | 5 | 307 |
| February | ..... | ..... | ..... | 5 | 278 |
| March | ..... | 1,520 | ..... | 516 | 31,700 |
| April | ..... | 4,400 | 90 | 1,140 | 67,800 |
| May | ..... | 1,310 | 54 | 153 | 9,410 |
| June | ..... | 2,870 | 111 | 958 | 57,000 |
| July | ..... | 740 | 67 | 168 | 10,300 |
| August | ..... | 184 | 10 | 63.7 | 3,920 |
| September | ..... | 86 | 6 | 18.2 | 1,080 |
| Water Year 1921-22 | ..... | 4,400 | ..... | 253.1 | 183,246 |
| **1922-23** | | | | | |
| October | ..... | 10 | 6 | 7 | 420 |
| November | ..... | 107 | 10 | 53 | 3,150 |
| December | ..... | 35 | 20 | 26 | 1,580 |
| January | ..... | 180 | 15 | 27 | 1,650 |
| February | ..... | 126 | 15 | 26 | 1,460 |
| March | ..... | 6,900 | 40 | 1,208 | 74,300 |
| April | ..... | ..... | ..... | 1,000 | 59,400 |
| May | ..... | 280 | 62 | 123 | 760 |
| June | ..... | 1,800 | 62 | 218 | 13,000 |
| July | ..... | 1,450 | 175 | 557 | 34,300 |
| August | ..... | 770 | 100 | 328 | 20,200 |
| September | ..... | 900 | 8 | 184 | 10,900 |
| Water Year 1922-23 | ..... | 6,900 | 6 | 314 | 228,000 |
| **1923-24** | | | | | |
| October | ..... | 900 | 180 | 420 | 25,800 |
| November | ..... | 180 | 56 | 119 | 7,080 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 1,880 | 40 | 541 | 32,200 |
| May | ..... | 210 | 41 | 87.6 | 5,390 |
| June | ..... | 650 | 33 | 126 | 7,500 |
| July | ..... | 81 | 15 | 40.2 | 2,470 |
| August | ..... | 1,590 | 9 | 163 | 10,000 |
| September | ..... | 33 | 3 | 13.3 | 791 |
| Water Year 1923-24 | ..... | 1,880 | 3 | 187.7 | 91,231 |
| **1924-25** | | | | | |
| October | ..... | 102 | 5 | 34 | 2,110 |
| November | ..... | 33 | 9 | 18 | 1,060 |
| December | ..... | 15 | 6 | 8 | 512 |
| January | ..... | 5 | 5 | 5 | 306 |
| February | ..... | 180 | 5 | 52 | 2,880 |
| March | ..... | 4,400 | 15 | 913 | 56,200 |
| April | ..... | 650 | 46 | 137 | 8,170 |
| May | ..... | 180 | 9 | 27 | 1,680 |
| June | ..... | 2,870 | 0 | 362 | 21,500 |
| July | ..... | 126 | 3 | 34 | 2,080 |
| August | ..... | 3 | 0 | 2 | 99 |
| September | ..... | 46 | 0 | 5 | 317 |
| Water year 1924-25 | ..... | 4,400 | 0 | 133 | 96,900 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1925-26 | | | | | |
| October | ..... | 3 | 1 | 2 | 140 |
| November | ..... | 5 | 2 | 3 | 170 |
| December | ..... | 3 | 3 | 4 | 250 |
| January | ..... | 3 | 3 | 3 | 180 |
| February | ..... | 54 | 3 | 10 | 570 |
| March | ..... | 210 | 33 | 100 | 6,120 |
| April | ..... | 81 | 23 | 42 | 2,470 |
| May | ..... | 62 | 15 | 30 | 1,820 |
| June | ..... | 1,590 | 23 | 284 | 16,900 |
| July | ..... | 540 | 33 | 82 | 5,060 |
| August | ..... | 228 | 23 | 64 | 3,950 |
| September | ..... | 650 | 23 | 104 | 6,200 |
| Water year 1925-26 | ..... | 1,590 | 1 | 61 | 43,800 |
| 1926-27 | | | | | |
| October | ..... | 33 | 15 | 23 | 1,430 |
| November | ..... | 33 | 16 | 22 | 1,310 |
| December | ..... | 15 | 13 | 15 | 910 |
| January | ..... | 33 | 8 | 11 | 670 |
| February | ..... | 152 | 5 | 31 | 1,700 |
| March | ..... | 1,240 | 23 | 550 | 3,380 |
| April | ..... | 210 | 102 | 145 | 8,640 |
| May | ..... | 3,230 | 81 | 1,003 | 61,700 |
| June | ..... | 835 | 102 | 225 | 1,340 |
| July | ..... | 868 | 62 | 153 | 9,420 |
| August | ..... | 430 | 23 | 66 | 4,060 |
| September | ..... | 46 | 9 | 20 | 1,180 |
| Water year 1926-27 | ..... | 3.230 | 5 | 189 | 138,200 |
| 1927-28 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 27-31 | ..... | 359 | 202 | 280 | 2,780 |
| April | ..... | 178 | 31 | 72.3 | 4,300 |
| May | ..... | 31 | 4 | 18.1 | 1,110 |
| June | ..... | 960 | 2 | 127 | 7,560 |
| July | ..... | 2,420 | 101 | 433 | 26,600 |
| August | ..... | 2,500 | 43 | 203 | 12,500 |
| September | ..... | 2,180 | 21 | 165 | 9,820 |
| Water year 1927-28 | ..... | 2.500 | 2 | 173.4 | 64,670 |
| *1928-29 | | | | | |
| October | ..... | 21 | 4.2 | 9.79 | 602 |
| November 1-23 | ..... | 21 | 4.2 | 12.7 | 579 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 12-31 | ..... | 6,390 | 1,140 | 2,980 | 118,000 |
| April | ..... | 1,340 | 73 | 353 | 21,000 |
| May | ..... | 573 | 32 | 70.3 | 4,320 |
| June | ..... | 1,410 | 59 | 467 | 27,800 |
| July | ..... | 53 | 2.7 | 19.5 | 1,200 |
| August | ..... | 163 | .1 | 16.2 | 996 |
| September | ..... | 30 | 0 | 4.46 | 265 |
| Water Year 1928-29 | ..... | 6,390 | 0 | 342.8 | 174,762 |

*In 1928 the name was changed to Timmer, North Dakota.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1929-30** | | | | | |
| October | ..... | 256 | 1.3 | 18.8 | 1,160 |
| November | ..... | 28 | 6.5 | 11.5 | 365 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February 21-25 | ..... | 1,560 | 136 | 927 | 9,190 |
| March 16-31 | ..... | 3,220 | 328 | 1,250 | 39,700 |
| April | ..... | 949 | 67 | 218 | 13,000 |
| May | ..... | 530 | 25 | 114 | 7,010 |
| June | ..... | 572 | 10 | 71.7 | 4,270 |
| July | ..... | 169 | .9 | 25.9 | 1,590 |
| August | ..... | .8 | 0 | .32 | 20 |
| September | ..... | 29 | .2 | 3.84 | 228 |
| Water Year 1929-30 | ..... | 3,220 | 0 | 150.1 | 76,533 |
| **1930-31** | | | | | |
| October | ..... | 66 | .7 | 11.9 | 732 |
| November | ..... | 6.8 | 4.1 | 5.33 | 317 |
| December | ..... | ..... | ..... | 5 | 307 |
| January | ..... | ..... | ..... | 11.8 | 726 |
| February | ..... | ..... | ..... | 40.4 | 2,240 |
| March | ..... | ..... | ..... | 36.5 | 2,250 |
| April | ..... | ..... | 21 | 52.4 | 3,120 |
| May | ..... | 40 | 4.8 | 11.5 | 707 |
| June | ..... | 1,080 | 2.6 | 63.1 | 3,750 |
| July | ..... | 345 | 1.7 | 43.3 | 2,660 |
| August | ..... | 136 | 2.6 | 16.8 | 1,030 |
| September | ..... | 52 | 0 | 6.49 | 386 |
| Water Year 1930-31 | ..... | 1,080 | 0 | 25.2 | 18,225 |
| **1931-32** | | | | | |
| October | ..... | 6.5 | .9 | 2.20 | 135 |
| November 1-21 | ..... | 5.4 | ..... | 4.35 | 181 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | 75.3 | 4,630 |
| April | ..... | 530 | 39 | 139 | 8,270 |
| May | ..... | 193 | 31 | 78 | 4,800 |
| June | ..... | 6,390 | 54 | 757 | 45,000 |
| July | ..... | 530 | 8.1 | 88.2 | 5,420 |
| August | ..... | 8.1 | .9 | 2.35 | 144 |
| September | ..... | 6.8 | .3 | 1.23 | 73 |
| Water Year 1931-32 | ..... | 6.390 | .3 | 130.1 | 68,653 |
| **1932-33** | | | | | |
| October | ..... | 19 | .2 | 5.24 | 322 |
| November 1-12 | ..... | 14 | ..... | 8.34 | 198 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February 23-28 | ..... | 160 | 12 | 65.5 | 1,020 |
| March | ..... | 1,350 | 75 | 706 | 43,400 |
| April | ..... | 424 | 62 | 166 | 9,880 |
| May | ..... | 720 | 28 | 110 | 6,760 |
| June | ..... | 110 | 3.8 | 38.6 | 2,300 |
| July | ..... | 22 | 0 | 6.94 | 427 |
| August | ..... | 0 | 0 | 0 | 0 |
| September | ..... | 3.8 | 0 | .7 | 42 |
| Water Year 1932-33 | ..... | 1,350 | 0 | 124.3 | 64,349 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1933-34 | | | | | |
| October | ..... | 0 | 0 | 0 | 0 |
| November | ..... | 8.2 | 0 | 1.52 | 90 |
| December | ..... | 8.2 | 0 | .85 | 52 |
| January | ..... | 0 | 0 | 0 | 0 |
| February | ..... | 6 | 0 | .32 | 18 |
| March | ..... | ..... | 0 | 9.32 | 573 |
| April | ..... | 40 | 0 | 16.17 | 958 |
| May | ..... | 3.9 | 0 | 1.46 | 90 |
| June | ..... | 72 | 0 | 11.1 | 660 |
| July | ..... | 45 | 0 | 5.26 | 324 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water Year 1933-34 | ..... | 72 | 0 | 3.8 | 2,765 |

## CANNONBALL RIVER AT BREIEN, NORTH DAKOTA

Location: Latitude 46° 23′, Longitude 100° 56′, in Section 36, Township 134 N., Range 82W., at bridge on State Highway 6. 950 feet downstream from Louise Creek, and one-half mile south of Breien, Sioux County.

Drainage: 4,066 square miles.

Records Available: August 1934 to September 1944.

Extremes: Maximum discharge 21,900 second-feet, March 27, 1943.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1933-34** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | ..... | ..... | ..... | ..... |
| May | ..... | ..... | ..... | ..... | ..... |
| June | ..... | ..... | ..... | ..... | ..... |
| July | ..... | ..... | ..... | ..... | ..... |
| August 15-31 | ..... | 2.65 | 0.01 | 0.605 | 20 |
| September | ..... | .35 | .26 | .306 | 18 |
| Water Year 1933-34 | ..... | ..... | ..... | ..... | ..... |
| **1934-35** | | | | | |
| October | 306.4 | 178 | 0.1 | 9.88 | 608 |
| November | 25.2 | 1.1 | .6 | .84 | 50 |
| December | 11.7 | .9 | .1 | .38 | 23 |
| January | 1.0 | .1 | 0 | .03 | 2.0 |
| February | 0 | 0 | 0 | 0 | 0 |
| March | 3,233.3 | 868 | 0 | 104 | 6,410 |
| April | 785 | 97 | 5 | 26.2 | 1,560 |
| May | 2,837 | 614 | 22 | 91.5 | 5,630 |
| June | 4,646.5 | 1,060 | 2.5 | 155 | 9,220 |
| July | 9,918 | 2,050 | 9 | 320 | 19,670 |
| August | 1,285.1 | 817 | .5 | 41.5 | 2,550 |
| September | 31.2 | 12 | .4 | 1.04 | 62 |
| Water year 1934-35 | 23,080.7 | 2,050 | 0 | 63.2 | 45,785 |
| **1935-36** | | | | | |
| October | 30.6 | 1.4 | 0.5 | 0.99 | 61 |
| November | 32.0 | 1.2 | .9 | 1.07 | 63 |
| December | 26.7 | 1.2 | .5 | .86 | 53 |
| January | 10.7 | .8 | .2 | .35 | 21 |
| February | 206.6 | 56 | .2 | 7.12 | 410 |
| March | 17,860 | 2,040 | 69 | 576 | 35,420 |
| April | 3,541 | 388 | 36 | 118 | 7,020 |
| May | 697 | 73 | 5 | 22.5 | 1,380 |
| June | 92.9 | 9 | .5 | 3.10 | 184 |
| July | 5.2 | .4 | 0 | .17 | 10 |
| August | 15.1 | 5 | .1 | .49 | 30 |
| September | 17.1 | 4.9 | .2 | .57 | 34 |
| Water year 1935-36 | 22,534.9 | 2,040 | 0 | 61.6 | 44,686 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1936-37** | | | | | |
| October | 14.7 | 0.7 | 0.2 | 0.47 | 29 |
| November | 21.8 | 1.3 | .5 | .73 | 43 |
| December | 15.4 | .9 | .3 | .50 | 31 |
| January | 11.9 | 1.5 | .1 | .38 | 24 |
| February | 1.5 | .1 | 0 | .05 | 3.0 |
| March | 9,712.5 | 1,510 | 0 | 313 | 19,260 |
| April | 9,449 | 860 | 62 | 315 | 18,740 |
| May | 729.2 | 71 | 4.2 | 23.5 | 1,450 |
| June | 71,521 | 10,400 | 22 | 2,384 | 141,900 |
| July | 7,636 | 984 | 56 | 246 | 15,150 |
| August | 1,076 | 254 | 9 | 34.7 | 2,130 |
| September | 2,581 | 472 | 8 | 86.0 | 5,120 |
| Water year 1936-37 | 102,770.0 | 10,400 | 0 | 282 | 203,880 |
| **1937-38** | | | | | |
| October | 461 | 22 | 10 | 14.9 | 914 |
| November | 305.0 | 20 | 3.0 | 10.2 | 605 |
| December | 200 | 8 | 5 | 6.45 | 397 |
| January | 206 | 7 | 6 | 6.65 | 409 |
| February | 210 | 44 | 6 | 7.50 | 417 |
| March | 11,592 | 1,330 | 36 | 374 | 22,990 |
| April | 2,163 | 582 | 26 | 72.1 | 4,290 |
| May | 1,388 | 306 | 17 | 44.8 | 2,750 |
| June | 16,280 | 2,740 | 10 | 543 | 32,290 |
| July | 37,389 | 4,410 | 89 | 1,206 | 74,160 |
| August | 1,233 | 89 | 16 | 39.8 | 2,450 |
| September | 1,663 | 413 | 13 | 55.4 | 3,300 |
| Water year 1937-38 | 73,090 | 4,410 | 3.0 | 200 | 144,972 |
| **1938-39** | | | | | |
| October | 316 | 12 | 8 | 10.2 | 627 |
| November | 332 | 13 | 10 | 11.1 | 659 |
| December | 375.9 | 22 | 1.3 | 12.1 | 746 |
| January | 118.9 | 4.9 | .9 | 3.84 | 236 |
| February | 8.5 | 1.0 | .2 | .30 | 17 |
| March | 22,076.3 | 3,280 | 2.3 | 712 | 43,790 |
| April | 4,277 | 493 | 50 | 143 | 8,480 |
| May | 1,019 | 83 | 15 | 32.9 | 2,020 |
| June | 6,799 | 1,520 | 17 | 227 | 13,490 |
| July | 5,278 | 618 | 12 | 170 | 10,470 |
| August | 471.2 | 223 | .6 | 15.2 | 935 |
| September | 184.8 | 51 | .7 | 6.16 | 367 |
| Water year 1938-39 | 41,256.6 | 3,280 | .2 | 113 | 81,840 |
| **1939-40** | | | | | |
| October | 45.2 | 2.4 | 1.1 | 1.46 | 90 |
| November | 112.3 | 6.2 | 2.0 | 3.74 | 223 |
| December | 201.1 | 9 | 2 | 6.49 | 399 |
| January | 3.4 | 1 | 0 | .11 | 6.7 |
| February | 3.4 | .6 | 0 | .12 | 6.7 |
| March | 4,401 | 1,300 | 2 | 142 | 8,730 |
| April | 8,695 | 1,700 | 63 | 290 | 17,250 |
| May | 9,272 | 1,420 | 35 | 299 | 18,390 |
| June | 548.0 | 50 | 3.2 | 18.3 | 1,090 |
| July | 1,622.4 | 468 | .3 | 52.3 | 3,220 |
| August | 2,870 | 395 | 15 | 92.6 | 5,690 |
| September | 240.0 | 27 | .9 | 8.00 | 476 |
| Water year 1939-40 | 28,013.8 | 1,700 | 0 | 76.5 | 55,571.4 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1940-41** | | | | | |
| October | 305.4 | 20 | 2.4 | 9.85 | 606 |
| November | 208.5 | 8.5 | 5 | 6.95 | 414 |
| December | 67 | 6 | 0 | 2.2 | 133 |
| January | 0 | 0 | 0 | 0 | 0 |
| February | 0 | 0 | 0 | 0 | 0 |
| March | 27,401 | 3,720 | 0 | 884 | 54,350 |
| April | 4,744 | 550 | 56 | 158 | 9,410 |
| May | 1,620 | 180 | 16 | 52.3 | 3,210 |
| June | 43,304 | 8,640 | 41 | 1,443 | 85,890 |
| July | 1,798 | 144 | 12 | 58.0 | 3,570 |
| August | 208.5 | 35 | 2.0 | 6.73 | 414 |
| September | 1,297.8 | 260 | 5.3 | 43.3 | 2,570 |
| Water year 1940-41 | 80,954.2 | 8 640 | 0 | 222 | 160,567 |
| **1941-42** | | | | | |
| October | 1,081 | 135 | 19 | 34.9 | 2,140 |
| November | 494 | 22 | 10 | 16.5 | 980 |
| December | 240 | 18 | 3 | 7.7 | 476 |
| January | 81 | 4 | 1 | 2.6 | 161 |
| February | 85 | 4 | 2 | 3.0 | 169 |
| March | 3,540 | 400 | 4 | 114 | 7,020 |
| April | 8,879 | 800 | 90 | 296 | 17,610 |
| May | 11,927 | 1,700 | 110 | 385 | 23,660 |
| June | 6,207 | 540 | 86 | 207 | 12,310 |
| July | 1,684 | 170 | 16 | 54.3 | 3,340 |
| August | 835.8 | 133 | 3.0 | 27.0 | 1,660 |
| September | 655.5 | 64 | 4.4 | 21.8 | 1,300 |
| Water year 1941-42 | 35,709.3 | 1,700 | 1 | 97.8 | 70,826 |
| **1942-43** | | | | | |
| October | 344 | 17 | 8 | 11.1 | 682 |
| November | 376 | 15 | 6 | 12.5 | 746 |
| December | 100 | 5 | 2 | 3.2 | 198 |
| January | 31 | 4 | 0 | 10 | 61 |
| February | 8,850 | 2,400 | 0 | 316 | 17,550 |
| March | 132,070 | 20,900 | 160 | 4,260 | 262,000 |
| April | 35,047 | 7,210 | 210 | 1,168 | 69,510 |
| May | 4,327 | 197 | 88 | 140 | 8,580 |
| June | 25,095 | 6,270 | 146 | 836 | 49,780 |
| July | 16,264 | 1,830 | 94 | 525 | 32,260 |
| August | 1,586 | 85 | 27 | 51.2 | 3,150 |
| September | 832 | 55 | 17 | 27.7 | 1,650 |
| Water year 1942-43 | 224,922 | 20,900 | 0 | 616 | 446,167 |
| **1943-44** | | | | | |
| October | 514 | 31 | 14 | 16.6 | 1,020 |
| November | 1,101 | 55 | 25 | 36.7 | 2,180 |
| December | 466 | 31 | 5 | 15 | 924 |
| January | 300 | 18 | 4 | 9.7 | 595 |
| February | 290 | 16 | 6 | 10 | 575 |
| March | 1,661 | 400 | 12 | 53.6 | 3,290 |
| April | 100,116 | 9,270 | 232 | 3,377 | 198,600 |
| May | 4,930 | 254 | 111 | 159 | 9,780 |
| June | 43,094 | 3,520 | 101 | 1,436 | 85,480 |
| July | 14,037 | 2,540 | 68 | 453 | 27,840 |
| August | 1,542 | 111 | 33 | 49.7 | 3,060 |
| September | 897 | 48 | 23 | 29.9 | 1,780 |
| Water year 1943-44 | 168,948 | 9,270 | 4 | 462 | 335,100 |

## CEDAR CREEK NEAR KELDRON, SOUTH DAKOTA

Location: Lat. 46°02′, long. 101°49′, in S½ sec. 33, T. 130N., R. 89 W. at county highway bridge about 6 miles north of North Dakota-South Dakota state line, 7 miles north of Keldron, 10½ miles south of Pretty Rock, N. Dak.

Drainage Area: 1,260.

Records available: Established April 9, 1943.

Extremes: Maximum stage of 21.8 feet, minimum gage height 3 feet.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1942-43 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 129 | 29 | 54.5 | 2,380 |
| May | ..... | 29 | 11 | 19.9 | 1,220 |
| June | ..... | 591 | 23 | 108 | 6,410 |
| July | ..... | 754 | 14 | 156 | 9,570 |
| August | ..... | 42 | 0 | 5.12 | 315 |
| September | ..... | .9 | 0 | .09 | 5.4 |
| Water year 1942-43 | ..... | ..... | ..... | ..... | 19.900.4 |

## CEDAR CREEK NEAR RALEIGH, NORTH DAKOTA

Location: Lat. 46°05′30″, long. 101°20′00″, on line between sec. 8 and 9, T. 130 N., R85W at bridge on State Highway 31, about 3 miles upstream from mouth and 19 miles south of Raleigh.

Drainage area: 1,720 square miles.

Records available: April to September 1939 (Discontinued).

Extremes: Maximum discharge during period, 1,380 second feet Apr. 25, no flow on many days..

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1938-39 | | | | | |
| April (15 Days) | 872 | 436 | 18 | 58.1 | 1,730 |
| May | 367.4 | 48 | 2.9 | 11.9 | 729 |
| June | 1,234.8 | 285 | 3.6 | 41.2 | 2,450 |
| July | 1,719.4 | 285 | .6 | 55.5 | 3,410 |
| August | 5.1 | 1.1 | 0 | 1.6 | 10 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1938-39 | 4,198.7 | ..... | ..... | ..... | 8,330 |

Discontinued.

## GRAND RIVER AT HALEY, NORTH DAKOTA

Drainage Area: 500 Sq. Miles.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1907-08** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | ..... | ..... | ..... | ..... |
| May | ..... | 296 | 1 | 56.7 | 3,490 |
| June | ..... | 227 | 3.5 | 48.7 | 2,900 |
| July | ..... | 36 | .2 | 9.57 | 588 |
| August | ..... | 8 | ..... | 1.36 | 84 |
| September | ..... | 1.1 | .5 | .54 | 32 |
| Water year 1907-08 | ..... | 296 | ..... | ..... | 7,094 |
| **1908-09** | | | | | |
| October | ..... | 4 | .5 | .83 | 51 |
| November | ..... | .5 | .5 | .5 | 30 |
| December | ..... | .5 | .5 | .5 | 31 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | 324 | .5 | 39 | 2,170 |
| March | ..... | 356 | 20 | 103 | 6,330 |
| April | ..... | 20 | .5 | 7.03 | 418 |
| May | ..... | 500 | .5 | 20.3 | 1,250 |
| June | ..... | 396 | 10 | 98.7 | 5,870 |
| July | ..... | 28 | 3.5 | 11.9 | 732 |
| August | ..... | 149 | 2 | 11.2 | 689 |
| September | ..... | 2 | 2 | 2 | 119 |
| Water year 1908-09 | ..... | 500 | ..... | ..... | 17,690 |
| **1909-10** | | | | | |
| October | ..... | 3.5 | 2 | 2.15 | 132 |
| November | ..... | 2 | 2 | 2 | 119 |
| December | ..... | 2 | 2 | 2 | 123 |
| January | ..... | ..... | ..... | 1 | 61 |
| February | ..... | ..... | ..... | 1 | 56 |
| March | ..... | ..... | ..... | 186 | 11,400 |
| April | ..... | 144 | 20 | 34.4 | 2,050 |
| May | ..... | 13 | 8 | 11.7 | 719 |
| June | ..... | 66 | 8 | 19.9 | 1,180 |
| July | ..... | 3.5 | .5 | 1.37 | 84 |
| August | ..... | .5 | .5 | .5 | 31 |
| September | ..... | 3.5 | .5 | .69 | 41 |
| Water year 1909-10 | ..... | 144 | ..... | ..... | 15,996 |
| **1910-11** | | | | | |
| October | ..... | ..... | ..... | .5 | 31 |
| November | ..... | ..... | ..... | .5 | 30 |
| December | ..... | ..... | ..... | .3 | 20 |
| January | ..... | ..... | ..... | ..... | 15 |
| February | ..... | ..... | ..... | ..... | 15 |
| March | ..... | 5 | ..... | 2.5 | 160 |
| April | ..... | ..... | ..... | 3.3 | 200 |
| May | ..... | ..... | ..... | 3 | 190 |
| June | ..... | ..... | ..... | 3 | 180 |
| July | ..... | ..... | ..... | .6 | 37 |
| August | ..... | ..... | ..... | .2 | 12 |
| September | ..... | ..... | ..... | .2 | 13 |
| Water year 1910-11 | ..... | 5 | ..... | ..... | 903 |

* Note: Fragmentary.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1911-12** | | | | | |
| October | ..... | .5 | .5 | .5 | 31 |
| November | ..... | .5 | .5 | .5 | 30 |
| December | ..... | ..... | ..... | .5 | 31 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 26-31 | ..... | 1,000 | 40 | 403 | 4,800 |
| April | ..... | 185 | 62 | 112 | 6,660 |
| May | ..... | 354 | 54 | 89.9 | 5,530 |
| June | ..... | 84 | 9 | 60.5 | 3,600 |
| July | ..... | 449 | 1 | 63.8 | 3,920 |
| August | ..... | 1 | 1 | .20 | 12 |
| September | ..... | .2 | 1 | .11 | 7 |
| Water year 1911-12 | ..... | 1,000 | ..... | ..... | 24,621 |
| **1912-13** | | | | | |
| October | ..... | .4 | .4 | .4 | 25 |
| November | ..... | 3.5 | .1 | 2.04 | 121 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 2,040 | 3 | 123 | 7,330 |
| May | ..... | 3 | 1 | 1.65 | 101 |
| June | ..... | 1 | 1 | 1 | 60 |
| July | ..... | 81 | 1 | 6.06 | 373 |
| August | ..... | 1 | 1 | 1 | 62 |
| September | ..... | 1 | .3 | .56 | 33 |
| Water year 1912-13 | ..... | 2,040 | .3 | 11.3 | 8,105 |
| **1913-14** | | | | | |
| October | ..... | .3 | .3 | .3 | 18 |
| November | ..... | .3 | .3 | .3 | 18 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | 49 | 2.2 | 18.1 | 646 |
| April | ..... | 530 | 1.3 | 43.5 | 2,590 |
| May | ..... | 5 | ..... | 1.32 | 81 |
| June | ..... | 1,940 | ..... | 142 | 8,450 |
| July | ..... | 213 | 2.2 | 24 | 1,480 |
| August | ..... | 310 | 2.2 | 49.1 | 3,020 |
| September | ..... | 3.9 | 2.2 | 3.11 | 185 |
| Water year 1913-14 | ..... | 1,940 | 0 | 31.7 | 16,488 |
| **1914-15** | | | | | |
| October | ..... | 2.2 | 2.2 | 2.2 | 135 |
| November | ..... | ..... | ..... | 1.3 | 36 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | 16.9 | 369 |
| April | ..... | 19 | 2.2 | 3.9 | 234 |
| May | ..... | 1,140 | 2.2 | 57.1 | 3,510 |
| June | ..... | 3,230 | 16 | 199 | 11,900 |
| July | ..... | 1,090 | 7.5 | 210 | 12,900 |
| August | ..... | 370 | 5 | 46.9 | 2,880 |
| September | ..... | 3.4 | 3.4 | 3.4 | 202 |
| Water year 1914-15 | ..... | 3,230 | 2.2 | 67.9 | 32,166 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1915-16** | | | | | |
| October | ..... | 3.4 | 3.4 | 3.4 | 60.7 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 240 | 3 | 60 | 3.570 |
| May | ..... | 39 | 1 | 14 | 861 |
| June | ..... | 96 | 3 | 17.9 | 1,070 |
| July | ..... | 120 | 11 | 33.5 | 2,060 |
| August | ..... | 11 | 1.3 | 3.31 | 204 |
| September | ..... | 1.3 | 1.3 | 1.3 | 77.4 |
| Water year 1915-16 | ..... | 240 | 1 | 20.8 | 7,903 |
| **1916-17** | | | | | |
| October | ..... | 1.3 | 1.3 | 1.3 | 80 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | ..... | ..... | ..... | ..... |
| May | ..... | 22.5 | 3.4 | 10.1 | 618 |
| June | ..... | 22.5 | ..... | 4.3 | 258 |
| July | ..... | .9 | .2 | .3 | 21 |
| August | ..... | .9 | .2 | .3 | 16 |
| September | ..... | .2 | .2 | .2 | 12 |
| Water year 1916-17 | ..... | 22.5 | 0 | 2.8 | 1,005 |
| Note: 184 day record. | | | | | |
| **1917-18** | | | | | |
| October | ..... | ..... | ..... | .2 | 12 |
| November | ..... | ..... | ..... | .4 | 24 |
| December | ..... | ..... | ..... | .4 | 24 |
| January | ..... | ..... | ..... | .3 | 18 |
| February | ..... | ..... | ..... | .6 | 145 |
| March | ..... | ..... | ..... | 220 | 13,500 |
| April | ..... | ..... | ..... | 36 | 2,160 |
| May | ..... | ..... | ..... | 1.2 | 74 |
| June | ..... | ..... | ..... | .8 | 49 |
| July | ..... | ..... | ..... | 1.6 | 98 |
| August | ..... | 2,260 | ..... | 107 | 6,030 |
| September | ..... | ..... | ..... | .6 | 38 |
| Water year 1917-18 | ..... | 2,260 | ..... | ..... | 22,200 |
| **1918-19** | | | | | |
| October | ..... | ..... | ..... | .6 | 37 |
| November | ..... | ..... | ..... | .6 | 35 |
| December | ..... | ..... | ..... | .6 | 35 |
| January | ..... | ..... | ..... | 1 | 63 |
| February | ..... | ..... | ..... | .6 | 33 |
| March | ..... | 16 | ..... | 2.7 | 165 |
| April | ..... | 16 | 3 | 12 | 710 |
| May | ..... | ..... | ..... | 1 | 60 |
| June | ..... | ..... | ..... | .7 | 42 |
| July | ..... | ..... | ..... | .3 | 16 |
| August | ..... | ..... | ..... | .1 | 1 |
| September | ..... | ..... | ..... | .1 | 9 |
| Water year 1918-19 | ..... | ..... | ..... | ..... | 1,210 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1919-20 | | | | | |
| October | ..... | ..... | ..... | .2 | 15 |
| November | ..... | ..... | ..... | .6 | 41 |
| December | ..... | ..... | ..... | .3 | 18 |
| January | ..... | ..... | ..... | .2 | 12 |
| February | ..... | ..... | ..... | .2 | 12 |
| March | ..... | 488 | ..... | 155 | 10,100 |
| April | ..... | 180 | ..... | 40 | 2,370 |
| May | ..... | 3,860 | ..... | 243 | 15,000 |
| June | ..... | 11 | 2 | 6 | 383 |
| July | ..... | 658 | 5 | 157 | 6,570 |
| August | ..... | 49 | .1 | 3.4 | 43 |
| September | ..... | ..... | ..... | ..... | 13 |
| Water year 1919-20 | ..... | 3,860 | ..... | ..... | 34,600 |

| Month | Run-off in Acre-Feet |
|---|---|
| October 1920 | 115 |

*Discontinued.

## JAMES RIVER AT JAMESTOWN, NORTH DAKOTA

Location: Lat. 46°54′, long. 98°41′, in SE¼ sec. 36 T. 140N. R 64W, at Asylum bridge at southeast corner of Jamestown, 2.5 miles downstream from Pipestem Creek.

Drainage Area: 2,740 square miles.

Records Available: June 1928 to September 1934, August 1937 to September 1938, March 1943 to September 1944.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1927-28** | | | | | |
| June (11 Days) | 441 | 80 | 15 | 40.1 | 875 |
| July | 6,509 | 714 | 60 | 210 | 12,900 |
| August | 1,430 | 70 | 34 | 46.1 | 2,830 |
| September | 775 | 34 | 20 | 25.8 | 1,540 |
| Water year 1927-28 | 9,155 | 714 | 15 | 88.8 | 18,100 |
| **1928-29** | | | | | |
| October | 328.7 | 15 | 2 | 10.6 | 652 |
| November | 166.8 | 10.2 | 2 | 5.66 | 331 |
| December | 78 | 4 | 2 | 2.52 | 155 |
| January | 62 | 2 | 2 | 2 | 123 |
| February | 56 | 2 | 2 | 2 | 111 |
| March | 5,649.2 | 989 | 2.0 | 182 | 11,200 |
| April | 1,248 | 53 | 28 | 41.6 | 2,480 |
| May | 849 | 43 | 19 | 27.4 | 1,680 |
| June | 359.1 | 19 | 8.7 | 12 | 714 |
| July | 129.6 | 8.4 | .8 | 4.18 | 257 |
| August | 23.6 | 2.8 | .6 | .76 | 46.7 |
| September | 30 | 2.2 | .2 | 1 | 59.5 |
| Water year 1928-29 | 8,980 | 989 | .2 | 24.6 | 17,809.2 |
| **1929-30** | | | | | |
| October | 61.8 | 2.6 | 1.2 | 1.99 | 122 |
| November | 48.8 | 2 | 1 | 1.63 | 97 |
| December | 26.2 | 1.6 | .4 | .85 | 52 |
| January | 26.4 | 1 | .8 | .85 | 52 |
| February | 3,116.9 | 550 | .8 | 111 | 6,160 |
| March | 8,177 | 565 | 31 | 264 | 16,200 |
| April | 4,604 | 416 | 56 | 153 | 9,100 |
| May | 2,214 | 118 | 30 | 71.4 | 4,390 |
| June | 531 | 28 | 15 | 17.7 | 1,050 |
| July | 180.4 | 14 | 1 | 5.82 | 358 |
| August | 21.6 | 1.2 | .4 | .7 | 43 |
| September | 28.6 | 1 | .8 | .95 | 57 |
| Water year 1929-30 | 19,036.7 | 565 | .4 | 52.2 | 36,700 |
| **1930-31** | | | | | |
| October | 20.6 | 1.2 | .4 | .66 | 41 |
| November | 29 | 1.6 | .6 | .97 | 58 |
| December | 22.2 | .8 | .6 | .72 | 44 |
| January | 30.8 | 3.4 | .8 | .99 | 61 |
| February | 134 | 15 | 1 | 4.79 | 266 |
| March | 401.1 | 40 | 2.2 | 12.9 | 793 |
| April | 936 | 91 | 2.6 | 31.2 | 1,860 |
| May | 69.4 | 3.2 | 1.2 | 2.24 | 138 |
| June | 38 | 1.8 | .6 | 1.27 | 76 |
| July | 30.6 | 1.4 | .6 | .99 | 61 |
| August | 34.6 | 2.4 | .6 | 1.12 | 69 |
| September | 51.8 | 4.2 | 1 | 1.73 | 103 |
| Water year 1930-31 | 1,798.1 | 91.0 | .4 | 4.93 | 3,570 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1931-32** | | | | | |
| October | 40.9 | 6.9 | .4 | 1.32 | 81 |
| November | 19.2 | 1 | .2 | .64 | 38 |
| December | 35.2 | 1.8 | .8 | 1.14 | 70 |
| January | 38.2 | 1.4 | 1.2 | 1.23 | 76 |
| February | 1,890.4 | 626 | 1.2 | 65.2 | 3,750 |
| March | 2,455 | 388 | 14 | 79.2 | 4,870 |
| April | 1,162 | 50 | 24 | 38.7 | 2,300 |
| May | 380.8 | 37 | 3.8 | 12.3 | 756 |
| June | 407 | 37 | 5.5 | 13.6 | 809 |
| July | 92 | 8.7 | 1.2 | 2.97 | 183 |
| August | 33 | 1.4 | .8 | 1.06 | 65 |
| September | 118.5 | 11 | 1.8 | 3.95 | 235 |
| Water year 1931-32 | 6,672.9 | 626 | .2 | 18.2 | 13,233 |
| **1932-33** | | | | | |
| October | 302.8 | 36 | .4 | 9.77 | 601 |
| November | 27.4 | 1.2 | .4 | .91 | 54 |
| December | 23.0 | 1.2 | .6 | .74 | 46 |
| January | 31.8 | 1.2 | .6 | 1.03 | 63 |
| February | 792.6 | 520 | 1 | 28.3 | 1,570 |
| March | 3,328 | 475 | 38 | 107 | 6,580 |
| April | 1,649 | 91 | 18 | 55 | 3,270 |
| May | 786.9 | 124 | 4 | 25.4 | 1,560 |
| June | 60.9 | 4 | 0 | 2.01 | 120 |
| July | 21 | 2.4 | 0 | .67 | 41 |
| August | 4.6 | ..... | ..... | 26 | 9 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1932-33 | 7,027.5 | 520 | 0 | 21.8 | 13,914 |
| **1933-34** | | | | | |
| October | ..... | ..... | ..... | ..... | 0 |
| November | ..... | ..... | ..... | ..... | 31 |
| December | ..... | ..... | ..... | ..... | 73 |
| January | ..... | ..... | ..... | ..... | 15 |
| February | ..... | ..... | ..... | ..... | 81 |
| March | ..... | ..... | ..... | ..... | 81 |
| April | ..... | ..... | ..... | ..... | 229 |
| May | ..... | ..... | ..... | ..... | 170 |
| June | ..... | ..... | ..... | ..... | 316 |
| July | ..... | ..... | ..... | ..... | 100 |
| August | ..... | ..... | ..... | ..... | 75 |
| September | ..... | ..... | ..... | ..... | 100 |
| Water year 1933-34 | ..... | ..... | ..... | ..... | 1,271 |
| Discontinued. | | | | | |
| **1937-38** | | | | | |
| August (9 Days) | 5.8 | .8 | .4 | .64 | 12 |
| September | 21.5 | 3 | .4 | .72 | 43 |
| Water year 1937-38 | 27.3 | ..... | ..... | ..... | 55 |
| **1937-38** | | | | | |
| October | 30.5 | 1.5 | .6 | .98 | 60 |
| November | 30.1 | 1.9 | .7 | 1 | 60 |
| December | 26.9 | 1 | .6 | .87 | 53 |
| January | 29.7 | 1 | .8 | .96 | 59 |
| February | 31.5 | 2.7 | .9 | 1.12 | 62 |
| March | 477.2 | 98 | .9 | 15.4 | 94.7 |
| April | 54.9 | 2.3 | 1.5 | 1.83 | 109 |
| May | 42.7 | 1.7 | 1.2 | 1.38 | 85 |
| June | 41.6 | 3.5 | 1.1 | 1.39 | 83 |
| July | 50 | 3.2 | .8 | 1.61 | 99 |
| August | 29.5 | 1.1 | .7 | .95 | 59 |
| September | 22.9 | 1.9 | .4 | .76 | 45 |
| Water year 1937-38 | 867.5 | 98 | .4 | 2.38 | 1,721 |

| | | | | | |
|---|---|---|---|---|---|
| Discontinued Uutil: | | | | | |
| 1942-43 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 29-31 | 4.860 | 1,730 | 1,530 | 1,620 | 9,640 |
| April | 17,371 | 1,420 | 209 | 579 | 34,450 |
| May | 3.821 | 218 | 49 | 123 | 7,580 |
| June | 6,293 | 347 | 72 | 210 | 12,480 |
| July | 4,018 | 226 | 53 | 130 | 7,970 |
| August | 391.6 | 46 | ..... | 12.6 | 777 |
| September | 149.9 | 10 | 1.8 | 5 | 297 |
| Water year 1942-43 | 36,904.5 | 1,730 | ..... | ..... | 73,194 |

## BOIS DE SIOUX AT WHITE ROCK, SOUTH DAKOTA

Location: Lat. 45°51′45″, long. 96°34′25″, in SW¼SW¼ sec. 27 T. 128N. R 47 W., 300 feet downstream from White Rock Dam, 4 miles south of White Rock and 5 miles northwest of Wheaton, Minn.

Drainage Area: 1,160 square miles.

Records Available: October 1941 to September 1944.

Extremes: Maximum discharge 1,120 second-feet May 24, 1943; maximum gage height June 23, 1944 9.28 feet.

| Month | Second Foot D- | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1941-42** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | ..... | ..... | ..... | ..... |
| May | 78 | 34 | ..... | 2.5 | 155 |
| June | 4,436 | 483 | ..... | 148 | 8,800 |
| July | 19,322 | 835 | 118 | 623 | 38,320 |
| August | 6,130 | 260 | 105 | 198 | 12,160 |
| September | 7,315 | 334 | 105 | 244 | 14,510 |
| Water year 1941-42 | 37,281 | 835 | ..... | 102 | 37,281 |
| **1942-43** | | | | | |
| October | 1,418 | 154 | ..... | 45.7 | 2,810 |
| November | 4.5 | .6 | ..... | .15 | 8.9 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 185 | 55 | ..... | 6 | 367 |
| April | 9,758 | 900 | 32 | 325 | 19,350 |
| May | 28,995 | 1,080 | 775 | 935 | 57,510 |
| June | 20,422 | 1,000 | 85 | 681 | 40,510 |
| July | 10,052 | 850 | 60 | 324 | 19,940 |
| August | 1,112.7 | 65 | 1.4 | 35.9 | 2,210 |
| September | 205.4 | 16 | 1.6 | 6.85 | 407 |
| Water year 1942-43 | 72,152.6 | 1,080 | 0 | 198 | 143,112.9 |
| **1943-44** | | | | | |
| October | 234.3 | 17 | 2.5 | 7.56 | 465 |
| November | 331 | 17 | 6.5 | 11 | 657 |
| December | 42.9 | 9.5 | ..... | 1.38 | 85 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 113.4 | 19 | ..... | 3.66 | 225 |
| April | 4,709.5 | 320 | 7.5 | 157 | 9,340 |
| May | 7,837 | 628 | 16 | 253 | 15,540 |
| June | 17,942 | 1,080 | 21 | 598 | 35,590 |
| July | 6,974 | 775 | 13 | 225 | 13,830 |
| August | 490.9 | 27 | 4.9 | 15.8 | 974 |
| September | 143.9 | 6.6 | 3.8 | 4.8 | 283 |
| Water year 1943-44 | 38,818.9 | 1,080 | 0 | 106 | 76,990 |

## ANTELOPE CREEK AT DWIGHT, NORTH DAKOTA

Location: In SE¼SE¼ sec. 20, T. 133 N., R. 48 W. lat. 46°18′50″, long. 96°44′05″. On bridge on U. S. Highway 81 about ½ mile north of Dwight, N. Dak.

Record Available: Established March 20, 1944.

Extremes: Maximum stage about 16.0 feet, minimum .6 feet.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1943-44 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | 9.5 | .3 | 4.38 | 104 |
| April | ..... | 102 | 2.2 | 20.1 | 1,200 |
| May | ..... | 12 | 3.3 | 7.68 | 472 |
| June | ..... | 255 | .6 | 35.4 | 2,110 |
| July | ..... | 388 | .4 | 83.6 | 5,140 |
| August | ..... | 266 | .3 | 30.6 | 1,880 |
| September | ..... | 56 | .6 | 11.9 | 707 |
| Water year 1943-44 | ..... | ..... | ..... | ..... | 11,613 |

## BOIS DE SIOUX RIVER NEAR FAIRMOUNT, NORTH DAKOTA

Location: Chain gage, lat. 46°03′00″, long. 96°33′25″, on line between secs. 22 and 27 T. 130 N., R. 47W, at bridge on Minnesota Highway 55 and North Dakota Highway 11, 2 miles east of Fairmount, 5 miles west of Tenney, Minn. and 15 miles downstream from Lake Traverse.

Drainage Area: 1,540 square miles.

Records Available: April 1919 to September 1944.

Extremes: Maximum daily discharge 1,400 second-feet April 2-5, 1943, no flow during parts of several years.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1919** | | | | | |
| April | 209.3 | 9 | 6 | 6.91 | 411 |
| May | 388.5 | 19 | 6.5 | 12.5 | 769 |
| June | 376 | 39 | 8 | 12.5 | 744 |
| July | 1,230 | 51 | 17 | 39.7 | 2,440 |
| August | 1,635 | 77 | 33 | 52.7 | 3,240 |
| September 1-6 | 174 | 32 | 27 | 29 | 345 |
| Water year 1919 (159 Days) | ..... | ..... | ..... | ..... | 7,949 |
| **1920** | | | | | |
| April | 5,074 | 214 | 140 | 169 | 10,100 |
| May | 4,923 | 194 | 132 | 159 | 9,780 |
| June | 4,086 | 184 | 82 | 136 | 8,090 |
| July | 2,081 | 82 | 58 | 67 | 4,120 |
| August | 1,533 | 58 | 43 | 49 | 3,010 |
| September | 1,488 | 58 | 43 | 50 | 2,980 |
| Water year 1920 (183 Days) | ..... | ..... | ..... | ..... | 38,080 |
| **1920-21** | | | | | |
| October | 1,179 | 43 | 31 | 38 | 2,340 |
| November | 698 | 30 | 18 | 23.5 | 1,400 |
| December | 74 | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 280 | ..... | ..... | ..... | ..... |
| April | 1,176 | 64 | 34 | 39.2 | 2,330 |
| May | 998 | 36 | 30 | 32.6 | 2,000 |
| June | 606 | 38 | 10 | 20.3 | 1,210 |
| July | 225 | 11 | 3 | 6.94 | 426 |
| August | 18 | 2 | 0 | .58 | 36 |
| September | 130 | 11 | 0 | 4.33 | 258 |
| Water year 1920-21 (244 days) | ..... | ..... | ..... | ..... | 10,000 |
| **1921-22** | | | | | |
| October | 53 | 4 | 1 | 1.7 | 104 |
| November | 17.3 | 1 | .1 | .6 | 36 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 422 | 38 | 0 | 13.6 | 836 |
| April | 7,909 | 390 | 43 | 264 | 15,700 |
| May | 6,514 | 321 | 119 | 210 | 12,900 |
| June | 1,929 | 116 | 43 | 64.3 | 3,830 |
| July | 866 | 42 | 14 | 27.7 | 1,700 |
| August | 136.9 | 13 | .2 | 4.4 | 270 |
| September | 4.4 | .3 | 0 | .1 | 6 |
| Water year 1921-22 (365 Days) | ..... | 390 | 0 | 48.9 | 35,400 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1922-23 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 21 | 16 | 0 | .68 | 42 |
| April | 1,155 | 76 | 16 | 35.5 | 2,290 |
| May | 690 | 28 | 16 | 22.3 | 1,370 |
| June | 260 | 16 | 3 | 8.67 | 516 |
| July | 69 | 5 | 0 | 2.23 | 137 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1922-23 (365 days) | ..... | 76 | 0 | 6.01 | 4,360 |

No flow during year 1923-1924—366 days record.
No flow during year 1924-1925- 365 days record.

| | | | | | |
|---|---|---|---|---|---|
| 1925-26 | | | | | |
| March ('26) | 153 | 32 | 0 | 12.1 | 742 |
| Water year "25-26" (365 days) | ..... | 32 | 0 | 1 | 742 |

Only flow during year was March 8 to 29th.

| | | | | | |
|---|---|---|---|---|---|
| 1927 | | | | | |
| February | 12 | 3 | 0 | .43 | 24 |
| March | 531 | 56 | 4 | 17.5 | 1,076 |
| April | 1,249 | 70 | 16 | 41.7 | 2,481 |
| May | 36.1 | 16 | 9 | 11.6 | 713 |
| June | 616 | 32 | 11 | 20.5 | 1,220 |
| July | 659 | 32 | 11 | 21.3 | 1,310 |
| August | 91 | 10 | 0 | 2.94 | 181 |
| September | 143 | 11 | 3 | 4.77 | 284 |
| Water year 1926-27 (365 days) | 3,662 | 70 | 0 | 10.1 | 7,289 |
| 1927-28 | | | | | |
| October | 74 | 4 | 2 | 2.4 | 148 |
| November | 13 | 2 | 0 | .4 | 24 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 462 | 40 | 0 | 14.9 | 916 |
| April | 835 | 40 | 22 | 27.8 | 1,650 |
| May | 453 | 22 | 5 | 14.6 | 898 |
| June | 125 | 5 | 2 | 4.2 | 250 |
| July | 98 | 4 | 3 | 3.2 | 197 |
| August | 67 | 3 | 2 | 2.6 | 135 |
| September | 18 | 2 | 0 | .6 | 36 |
| Water year 1927-28 (365 days) | ..... | ..... | ..... | 3.8 | 2,768.5 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1928-29** | | | | | |
| October | 48 | 2 | 1 | 1.5 | 92 |
| November | 21 | ..... | ..... | .8 | 48 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 710 | 48 | 0 | 24.2 | 1,490 |
| April | 1,109 | 53 | 11 | 37.1 | 2,210 |
| May | 1,185 | 53 | 25 | 36.3 | 2,230 |
| June | 560 | 25 | 11 | 18.7 | 1,110 |
| July | 255 | 11 | 5 | 8.2 | 504 |
| August | 72 | 4 | 1 | 2.3 | 141 |
| September | 15 | 1 | ..... | .5 | 30 |
| Water year 1928-29 (365 days) | 3,975 | 53 | 0 | 10.8 | 7,855 |
| **1929-30** | | | | | |
| October | 62 | ..... | ..... | 2 | 123 |
| November | 30 | ..... | ..... | 1 | 60 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | 242 | 38 | 0 | 8.6 | 478 |
| March | 1,749 | 64 | 31 | 56.4 | 3,470 |
| April | 285 | 20 | 7 | 9.5 | 565 |
| May | 598 | 28 | 9 | 19.4 | 1,190 |
| June | 281 | 15 | 7 | 9.4 | 559 |
| July | 129 | 7 | 0 | 3.2 | 197 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1929-30 (365 Days) | 3,376 | 64 | 0 | 9.2 | 6,640 |

No flow during year 1930-1931, 365 Day Record.
" " " " 1931-1932, 366 Day Record.
" " " " 1932-1933, 365 Day Record.
" " " " 1933-1934, 365 Day Record.
" " " " 1934-1935, 365 Day Record.
" " " " 1935-1936, 366 Day Record.

| | | | | | |
|---|---|---|---|---|---|
| **1936-37** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 130 | 14 | 0 | 4.33 | 258 |
| May | 152 | 20 | 0 | 4.9 | 301 |
| June | ..... | ..... | ..... | ..... | ..... |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1936-37 | 282 | 20 | 0 | .77 | 559 |
| **1937-38** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 1,453.8 | 239 | 6.7 | 46.9 | 2,880 |
| April | 169 | 9.7 | 2.8 | 5.65 | 336 |
| May | 385 | 30 | 7.6 | 12.4 | 764 |
| June | 365 | 40 | 2.2 | 12.2 | 724 |
| July | 1,542.2 | 267 | .7 | 49.7 | 3,060 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1937-38 | 3,915 | ..... | ..... | ..... | 7,760 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1938-39** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 405 | 100 | 0 | 13.1 | 803 |
| April | 407 | 65 | 0 | 13.6 | 807 |
| May | 5.5 | 1 | 0 | .18 | 11 |
| June | 9.9 | 2 | 0 | .33 | 20 |
| July | 4.5 | 2 | 0 | .15 | 8.9 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1938-39 | 831.9 | 100 | 0 | 2.28 | 1,650 |

1939-1940—No record available.

| | | | | | |
|---|---|---|---|---|---|
| **1940-41** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 15.6 | 6 | 0 | .50 | 31 |
| April | 38.9 | 7 | .1 | 1.30 | 77 |
| May | 5.4 | .8 | 0 | .17 | 11 |
| June | 183.7 | 44 | 0 | 6.12 | 364 |
| July | 56.7 | 8 | 0 | 1.83 | 112 |
| August | 26.1 | 11 | 0 | .84 | 52 |
| September | 56.9 | 5.4 | .2 | 1.90 | 113 |
| Water year 1940-41 | 383.3 | 44 | 0 | 1.05 | 760 |
| **1941-42** | | | | | |
| October | 38.2 | 0 | 0 | 1.23 | 76 |
| November | 21.4 | 0 | 0 | .71 | 42 |
| December | 3.2 | 0 | 0 | .10 | 6.3 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 110 | 0 | 0 | 3.55 | 218 |
| April | 360.8 | 40 | .5 | 12 | 716 |
| May | 4,609 | 330 | 19 | 149 | 9,140 |
| June | 11,809 | 1.140 | 60 | 394 | 23,420 |
| July | 20,514 | 834 | 355 | 662 | 40,690 |
| August | 6,436 | 260 | 125 | 208 | 12,770 |
| September | 7,484 | 336 | 119 | 249 | 14,840 |
| Water year 1941-42 | 51,385.6 | 1,140 | 0 | 141 | 101,900 |
| **1942-43** | | | | | |
| October | 1,778.2 | 180 | .5 | 57.4 | 3,530 |
| November | 99.6 | 9.7 | 0 | 3.32 | 198 |
| December | 0 | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 2,240 | 1,200 | 0 | 72.3 | 4,440 |
| April | 18,746 | 1,400 | 66 | 625 | 37,180 |
| May | 28,757 | 1,110 | 766 | 928 | 57,040 |
| June | 21,764 | 1,020 | 130 | 725 | 43,170 |
| July | 10,563 | 880 | 62 | 341 | 20,950 |
| August | 1,080 | 62 | 3.7 | 34.8 | 2,140 |
| September | 142.5 | 7.8 | 2.5 | 4.75 | 283 |
| Water year 1942-43 | 85,170.3 | 1,400 | 0 | 233 | 168,900 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre Feet |
|---|---|---|---|---|---|
| 1943-44 | | | | | |
| October | 237.6 | 32 | 3.7 | 7.66 | 471 |
| November | 255.2 | 16 | 4.2 | 8.51 | 506 |
| December | 41.2 | 5.5 | ..... | 1.33 | 82 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 102 | ..... | ..... | 3.29 | 202 |
| April | 4,819 | 360 | 14 | 161 | 9,560 |
| May | 9.551 | 700 | 25 | 308 | 18,940 |
| June | 21,157 | 1.180 | 26 | 705 | 41,960 |
| July | 8,493 | 857 | 22 | 274 | 16,850 |
| August | 672 | 55 | 10 | 21.7 | 1,330 |
| September | 269.8 | 14 | 6.4 | 8.99 | 535 |
| Water year 1943-44 | 45.597.8 | 1.180 | ..... | 125 | 90,440 |

## RED RIVER AT WAHPETON, NORTH DAKOTA

Location: Chain gage, lat. 46°15'55". long. 96°35'40", in NE¼ Sec. 8, T. 132 N, R. 47W. at Wahpeton, two blocks downstream from confluence of Bois de Sioux and Otter Tail Rivers.

Drainage Area: 4,010 square miles.

Records Available: April 1942 to September 1944.

Extremes: Maximum daily discharge 5,000 second-feet April 2-6, 1943.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1941-42** | | | | | |
| April (4 days) | 1,529 | ..... | ..... | ..... | ..... |
| May | 31,665 | 1,750 | 595 | 1,021 | 62,810 |
| June | 38,159 | 3,220 | 695 | 1,272 | 75,690 |
| July | 27,965 | 1,200 | 475 | 902 | 55,470 |
| August | 12,115 | 695 | 334 | 391 | 24,030 |
| September | 14,289 | 625 | 334 | 476 | 28,340 |
| Water year 1941-42 | 125,722 | ..... | ..... | ..... | 246,300 |
| **1942-43** | | | | | |
| October | 12,150 | 450 | ..... | 392 | 24,100 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 12,780 | 3,600 | ..... | 412 | 25,350 |
| April | 64,575 | 5,000 | 660 | 2,152 | 128,100 |
| May | 51,750 | 1,900 | 1,400 | 1,669 | 102,600 |
| June | 54,540 | 2,980 | 1,400 | 1,818 | 108,200 |
| July | 33,142 | 2,500 | 334 | 1,069 | 65,740 |
| August | 17,435 | 1,000 | 400 | 562 | 34,580 |
| September | 12,085 | 450 | 334 | 403 | 23,970 |
| Water year 1942-43 | 258,857 | ..... | ..... | ..... | 488,540 |
| **1943-44** | | | | | |
| October | 12,873 | 475 | 355 | 415 | 25,530 |
| November | 9,925 | 425 | 150 | 331 | 19,690 |
| December | 8,730 | 400 | 200 | 282 | 17,320 |
| January | 6,090 | 240 | 140 | 196 | 12,080 |
| February | 4,420 | 200 | 120 | 152 | 8,770 |
| March | 6,050 | 320 | 130 | 195 | 12,000 |
| April | 19,236 | 1,050 | 320 | 641 | 38,150 |
| May | 29,780 | 1,910 | 487 | 961 | 59,070 |
| June | 57,304 | 4,360 | 513 | 1,910 | 113,700 |
| July | 41,464 | 2,620 | 361 | 1,340 | 82,240 |
| August | 13,691 | 619 | 361 | 442 | 27,160 |
| September | 17,778 | 678 | 487 | 593 | 35,260 |
| Water year 1943-44 | 227,341 | 4,360 | 120 | 621 | 451,000 |

## WILD RICE RIVER AT ABERCROMBIE, NORTH DAKOTA

Location: Staff gage, lat. 46°28'35", long. 96°47'15", in NE¼ SW¼ sec. 25, T. 135N, R 49 W, 160 feet upstream from rubble masonry dam which serves as control, 3½ miles northwest of Abercrombie, and 8 miles downstream from Antelope Creek.

Drainage Area: 2,170 square miles.

Records Available: April 1932 to September 1944.

Extremes: Maximum discharge 5,500 second feet Apr. 2, 1943; no flow some periods each year.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1931-32 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 4-30 | 365.8 | 28 | 5.7 | 13.5 | 723 |
| May | 179.9 | 11 | 1.6 | 5.8 | 357 |
| June | 97.8 | 62 | 1.6 | 3.26 | 194 |
| July | 219 | 2.6 | 0 | .71 | 44 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1931-32 | 665.4 | ..... | ..... | ..... | 1,320 |
| Note: 119 day record, no flow in August and September. | | | | | |
| 1932-33 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | 12 | 11 | 0 | .43 | 24 |
| March | 1,028.6 | 67 | 5.2 | 33.2 | 2,040 |
| April | 440.2 | 55 | 3.4 | 14.7 | 875 |
| May | 231.9 | 15 | 4.3 | 7.48 | 460 |
| June | 54.7 | 4.6 | 0 | 1.82 | 108 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1932-33 | 1,767.4 | 67 | 0 | 484 | 3,510 |
| Note: 150 day record, no flow during months omitted. | | | | | |
| 1933-34 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 16-31 | 8.3 | 1.4 | 0 | 52 | 16 |
| April | 111.4 | 15 | 0 | 3.71 | 221 |
| May | 3.4 | 1.2 | 0 | .11 | 6.7 |
| June | 40.5 | 5.3 | 0 | 1.35 | 80 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1933-34 | 163.6 | ..... | ..... | ..... | 323.7 |
| Note: 107 days record, no flow during months omitted. | | | | | |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1934-35** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 14-31 | 4,673 | 513 | 66 | 260 | 9,270 |
| April | 598.8 | 64 | 9.8 | 20 | 1,190 |
| May | 395 | 23 | 2.0 | 12.7 | 783 |
| June | 1,267 | 220 | 1.0 | 42.2 | 2,510 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1934-35 | 6,933.8 | ..... | ..... | ..... | 13,750 |

Note: 109 days, no flow during period of no record.

| | | | | | |
|---|---|---|---|---|---|
| **1935-36** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 2,492 | 389 | 0 | 80.4 | 4,940 |
| April | 1,668 | 132 | 14 | 55.6 | 3,310 |
| May | 404 | 38 | 1.4 | 13.0 | 801 |
| June | 10.7 | 1.9 | 0 | .36 | 21 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1935-36 | 4,574.7 | ..... | ..... | ..... | 9,070 |
| **1936-37** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 3,524 | 540 | 0 | 117 | 6,990 |
| May | 2,637 | 310 | 17 | 85.1 | 5,230 |
| June | 626.6 | 37 | 3.6 | 20.9 | 1,240 |
| July | 559 | 94 | 3.0 | 18 | 1,110 |
| August | 120.5 | 30 | 1 | 3.89 | 239 |
| September | 60 | 0 | 0 | 2 | 119 |
| Water year 1936-37 | 7,527.1 | 540 | 0 | 20.6 | 14,930 |
| **1937-38** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 2,662.2 | 285 | 8.2 | 133 | 5,280 |
| April | 379 | 78 | 6.8 | 12.6 | 752 |
| May | 1,032 | 108 | 12 | 33.3 | 2,050 |
| June | 279.9 | 20 | 2.1 | 9.33 | 555 |
| July | 11.2 | 3.1 | 0 | .36 | 22.2 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1937-38 | 4,364.3 | ..... | ..... | ..... | 8,660 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1938-39** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 7,824 | 1,700 | 0 | 252 | 15,520 |
| April | 1,374.3 | 192 | 2.5 | 45.8 | 2,730 |
| May | 99.6 | 11 | 0 | 3.21 | 198 |
| June | 700.8 | 85 | 0 | 23.4 | 1,390 |
| July | 726.8 | 70 | 1.2 | 23.4 | 1,440 |
| August | 57.5 | 11 | 0 | 1.85 | 114 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1938-39 | 10,783 | 1,700 | 0 | 29.3 | 21,390 |
| **1939-40** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 2,147 | 200 | 12 | 71.6 | 4,260 |
| May | 600.3 | 35 | 9.3 | 19.4 | 1,190 |
| June | 71.8 | 8.6 | 0 | 2.39 | 142 |
| July | .1 | .1 | 0 | 0.003 | .2 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1939-40 | 2,819.2 | 200 | 0 | 7.70 | 5,592.2 |
| **1940-41** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 2,453 | 402 | 0 | 79.1 | 4,870 |
| April | 1,904 | 209 | 27 | 63.5 | 3,780 |
| May | 587 | 37 | 4.4 | 18.9 | 1,160 |
| June | 2,338.7 | 402 | 7.4 | 78 | 4,640 |
| July | 377.4 | 27 | 2.7 | 12.2 | 749 |
| August | 139.4 | 18 | 0 | 4.50 | 276 |
| September | 298.9 | 22 | 2.7 | 9.96 | 593 |
| Water year 1940-41 | 8,098.4 | 402 | 0 | 22.2 | 16,068 |
| **1941-42** | | | | | |
| October | 226.7 | 11 | 4 | 7.31 | 450 |
| November | 169.2 | 6.5 | 4.4 | 5.64 | 336 |
| December | 98.5 | 4.4 | 1.2 | 3.18 | 195 |
| January | 2.3 | .9 | 0 | .7 | 4.6 |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 465 | 98 | 0 | 15 | 922 |
| April | 1,991 | 218 | 18 | 66.4 | 3,950 |
| May | 4,694 | 351 | 53 | 151 | 9,310 |
| June | 8,988 | 579 | 135 | 300 | 17,830 |
| July | 2,353 | 132 | 39 | 75.9 | 4,670 |
| August | 1,398.3 | 208 | 4.4 | 45.1 | 2,770 |
| September | 3,003 | 138 | 53 | 100 | 5,960 |
| Water year 1941-42 | 23,389 | 579 | 0 | 64.1 | 46,400 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1942-43** | | | | | |
| October | 3,439 | 138 | 85 | 111 | 6,820 |
| November | 1,812 | 106 | 36 | 60.4 | 3,590 |
| December | 595.8 | 36 | 91 | 19.2 | 1,180 |
| January | 207.3 | 8.8 | 4 | 6.69 | 411 |
| February | 51.3 | 4 | 0 | 1.83 | 102 |
| March | 7,210.4 | 4,500 | 0 | 233 | 14,300 |
| April | 52,999 | 5,430 | 289 | 1,767 | 103,100.7 |
| May | 5,401 | 272 | 103 | 174 | 10,710 |
| June | 21,206 | 1,350 | 207 | 707 | 42,060 |
| July | 10,960 | 1,220 | 87 | 354 | 21,740 |
| August | 1,598 | 120 | 24 | 51.5 | 3,170 |
| September | 679.5 | 36 | 5.9 | 22.6 | 1,350 |
| Water year 1942-43 | 106,159.3 | 5,430 | 0 | 291 | 210,500 |
| **1943-44** | | | | | |
| October | 223.9 | 10 | 5.2 | 7.22 | 444 |
| November | 347.9 | 19 | 7.4 | 11.6 | 690 |
| December | 178.1 | 13 | .5 | 5.75 | 353 |
| January | 15.7 | 1.4 | | .51 | 31 |
| February | 10.7 | 1.4 | | .37 | 21 |
| March | 640.5 | 95 | .8 | 20.7 | 1,270 |
| April | 4,440 | 248 | 42 | 148 | 8,810 |
| May | 5,227 | 238 | 88 | 169 | 10,370 |
| June | 7,301 | 790 | 82 | 243 | 14,480 |
| July | 14,369 | 925 | 80 | 464 | 28,500 |
| August | 4,164 | 478 | 32 | 134 | 8,260 |
| September | 2,583 | 261 | 25 | 86.1 | 5,120 |
| Water year 1943-44 | 39,500.8 | 925 | | 108 | 78,350 |

## WILD RICE AT MANTADOR, NORTH DAKOTA

Location: SE¼ sec. 12, T. 131 N. R. 51 W., lat. 46°10′20″, Long. 97°(0′35″. 1½ miles west and ¼ mile north of Mantador on bridge on farm road

Record available: Established March 20, 1944

Extremes: Maximum stage about 11.8 feet.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1943-44 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | | 20 | 0 | 3.22 | 198 |
| April | | 137 | 8.5 | 80.8 | 4,810 |
| May | | 187 | 57 | 123 | 7,560 |
| June | | 142 | 64 | 115 | 6,830 |
| July | | 400 | 64 | 244 | 14,990 |
| August | | 137 | 15 | 64.1 | 3,940 |
| September | | 115 | 17 | 46.2 | 2,750 |
| Water year 1943-44 | | | | | 41,078 |

## WILD RICE RIVER, WILD RICE, NORTH DAKOTA

Location: In T. 138N., R. 49 W. at highway bridge 3 miles southwest of Wild Rice.

Drainage area: 2,200 Square Miles.

Record Available: April to August 1919. Station was then discontinued.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1918-19 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 8th | ..... | 98 | 23 | 48.7 | 2,220 |
| May | ..... | 83 | 4 | 35.2 | 2,160 |
| June | ..... | 69 | 6 | 17.7 | 1,050 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | 23 | .1 | 2.86 | 176 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1918-19 | ..... | 98 | .1 | ..... | 5,606 |

## RED RIVER AT FARGO, NORTH DAKOTA

Location: Staff gage, lat 46°52′10″, long. 96°47′00″. in sec. 7, T. 139 N. R. 48W., just upstream from Island Park Dam, in Fargo and 10 miles upstream from Sheyenne River.

Drainage Area: 6,800 square miles

Records available: May 1901 to September 1944.

Average discharge: 42 years, 439 second-feet.

Extremes: Maximum discharge 18,000 second-feet April 7, 1943. No flow for many days in each year of period 1932-1941.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1901-02 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February 25-28 | | 616 | 347 | 497 | 3,943 |
| March | | 1,105 | 513 | 737 | 45,316 |
| April | | 700 | 392 | 469 | 27,907 |
| May | | 1,175 | 439 | 733 | 45,070 |
| June | | 1,035 | 730 | 904 | 53,792 |
| July | | 850 | 463 | 676 | 41,566 |
| August | | 564 | 369 | 463 | 28,469 |
| September | | 369 | 283 | 328 | 19,517 |
| Water Year 1901-02 | | | | | 265,580 |
| 1902-03 | | | | | |
| October | | 392 | 207 | 275 | 16,009 |
| November | | 392 | 172 | 298 | 17,732 |
| December 1-2 | | 189 | 189 | 189 | 750 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 27-31 | | 1,560 | 225 | 965 | 9,570 |
| April | | 2,450 | 564 | 1,260 | 74,975 |
| May | | 643 | 513 | 566 | 34,802 |
| June | | 538 | 392 | 460 | 27,372 |
| July | | 439 | 283 | 363 | 22,320 |
| August | | 325 | 225 | 268 | 16,479 |
| September | | 369 | 263 | 317 | 18,863 |
| Water Year 1902-03 | | | | | 238,872 |
| 1903-04 | | | | | |
| October | ..... | 564 | 325 | 471 | 28,961 |
| November 1-26 incl. | ..... | 590 | 439 | 474 | 24,444 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 6,089 | 1,281 | 3,222 | 191,700 |
| May | ..... | 1,650 | 878 | 1,043 | 64,130 |
| June | ..... | 2,832 | 822 | 1,268 | 75,460 |
| July | ..... | 2,354 | 636 | 1,124 | 69,120 |
| August | ..... | 636 | 378 | 502 | 30,870 |
| September | ..... | 512 | 444 | 488 | 26,900 |
| Water Year 1903-04 | ..... | ..... | ..... | ..... | 511,585 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1904-05** | | | | | |
| October | ..... | 512 | 444 | 488 | 30,010 |
| November | ..... | 466 | 231 | 428 | 25,470 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 730 | 392 | 480 | 28,560 |
| May | ..... | 4,250 | 392 | 1,641 | 100,900 |
| June | ..... | 1,000 | 790 | 937 | 55,760 |
| July | ..... | 1,140 | 880 | 1,032 | 63,460 |
| August | ..... | 1,525 | 910 | 1,131 | 69,540 |
| September | ..... | 1,000 | 790 | 908 | 54,030 |
| Water Year 1904-05 | ..... | ..... | ..... | ..... | 427,730 |
| **1905-06** | | | | | |
| October | ..... | 880 | 671 | 751 | 46,180 |
| November 1-29 | ..... | 700 | 590 | 641 | 36,870 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 3,050 | 1,230 | 2,050 | 122,000 |
| May | ..... | 2,430 | 1,200 | 1,630 | 100,000 |
| June | ..... | 1,910 | 1,570 | 1,680 | 100,000 |
| July | ..... | 1,910 | 1,260 | 1,550 | 95,300 |
| August | ..... | 1,460 | 1,100 | 1,290 | 79,300 |
| September | ..... | 1,330 | 949 | 1,070 | 63,700 |
| Water Year 1905-06 | ..... | ..... | ..... | ..... | 643,350 |
| **1906-07** | | | | | |
| October | ..... | 1,160 | 781 | 940 | 57,800 |
| November | ..... | 1,160 | ..... | 942 | 56,100 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 18-31 | ..... | ..... | ..... | 2,970 | 82,500 |
| April | ..... | ..... | ..... | 2,920 | 174,000 |
| May | ..... | 1,640 | 1,200 | 1,370 | 84,200 |
| June | ..... | 4,420 | 1,170 | 2,200 | 131,000 |
| July | ..... | 1,370 | 691 | 1,010 | 62,100 |
| August | ..... | 691 | 425 | 568 | 34,900 |
| September | ..... | 515 | 360 | 428 | 25,500 |
| Water Year 1906-07 | ..... | ..... | ..... | ..... | 708,100 |
| **1907-08** | | | | | |
| October | ..... | 515 | 403 | 456 | 28,000 |
| November | ..... | 469 | 220 | 400 | 23,800 |
| December | ..... | 403 | ..... | 315 | 19,400 |
| January | ..... | ..... | ..... | 290 | 17,800 |
| February | ..... | ..... | ..... | 250 | 14,400 |
| March | ..... | ..... | ..... | 500 | 30,700 |
| April | ..... | ..... | 563 | 1,100 | 65,500 |
| May | ..... | 1,010 | 563 | 691 | 42,500 |
| June | ..... | 2,600 | 885 | 1,720 | 102,000 |
| July | ..... | 1,850 | 945 | 1,230 | 75,600 |
| August | ..... | 945 | 515 | 696 | 42,800 |
| September | ..... | 539 | 403 | 462 | 27,500 |
| Water Year 1907-08 | ..... | ..... | ..... | ..... | 490,000 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1908-09** | | | | | |
| October | ..... | 492 | 381 | 414 | 25,500 |
| November | ..... | 450 | ..... | 360 | 21,400 |
| December | ..... | ..... | ..... | 300 | 18,400 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 14-31 | ..... | ..... | ..... | 523 | 18,700 |
| April | ..... | ..... | ..... | 947 | 56,400 |
| May | ..... | 1,780 | 797 | 937 | 57,600 |
| June | ..... | 1,610 | 743 | 1,110 | 66,000 |
| July | ..... | 743 | 450 | 609 | 37,400 |
| August | ..... | 853 | 565 | 685 | 42,100 |
| September | ..... | 970 | 690 | 791 | 47,100 |
| Water Year 1908-09 | ..... | ..... | ..... | ..... | 390,600 |
| **1909-10** | | | | | |
| October | ..... | 825 | 664 | 762 | 46,900 |
| November | ..... | ..... | ..... | 574 | 34,200 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | 2,130 | 131,000 |
| April | ..... | 1,960 | 1,120 | 1,430 | 85,100 |
| May | ..... | 1,280 | 662 | 967 | 59,500 |
| June | ..... | 635 | 380 | 491 | 29,200 |
| July | ..... | 356 | 131 | 220 | 13,500 |
| August | ..... | 131 | 43 | 85.3 | 5,240 |
| September | ..... | 60 | 43 | 47.9 | 2,850 |
| Water Year 1909-10 | ..... | ..... | ..... | ..... | 407,490 |
| **1910-11** | | | | | |
| October | ..... | 102 | 30 | 58.3 | 3,580 |
| November | ..... | ..... | ..... | 45.0 | 2,680 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | 556 | 60 | 246 | 15,100 |
| April | ..... | 608 | 286 | 370 | 22,000 |
| May | ..... | 309 | 242 | 283 | 17,400 |
| June | ..... | 428 | 116 | 240 | 14,300 |
| July | ..... | 131 | 79 | 102 | 6,270 |
| August | ..... | 221 | 116 | 166 | 10,200 |
| September | ..... | 221 | 116 | 160 | 9,520 |
| Water Year 1910-11 | ..... | ..... | ..... | ..... | 101,050 |
| **1911-12** | | | | | |
| October | ..... | 356 | 147 | 245 | 15,100 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 26-31 | ..... | 230 | 120 | 150 | 1,790 |
| April | ..... | 1,040 | 402 | 564 | 33,600 |
| May | ..... | 1,100 | 426 | 727 | 44,700 |
| June | ..... | 630 | 475 | 528 | 31,400 |
| July | ..... | 657 | 355 | 483 | 29,700 |
| August | ..... | 577 | 204 | 330 | 20,300 |
| September | ..... | 304 | 151 | 224 | 13,300 |
| Water Year 1911-12 | ..... | 1,100 | 120 | 466.3 | 189,890 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1912-13** | | | | | |
| October | ..... | 326 | 220 | 248 | 15,200 |
| November | ..... | 282 | 78 | 182 | 10,800 |
| December 1-7 | ..... | 93 | 64 | 76.3 | 1,060 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 870 | 290 | 461 | 27,650 |
| May | ..... | 455 | 290 | 361 | 21,660 |
| June | ..... | 382 | 290 | 339 | 21,015 |
| July | ..... | 1,460 | 290 | 638 | 39,230 |
| August | ..... | 536 | 142 | 270 | 16,200 |
| September | ..... | 839 | 190 | 421 | 25,260 |
| Water Year 1912-13 | ..... | 1,460 | 64 | 357 | 178,075 |
| **1913-14** | | | | | |
| October | ..... | 685 | 290 | 494 | 30,375 |
| November | ..... | 625 | 335 | 436 | 25,944 |
| December | ..... | ..... | ..... | 352 | 21,644 |
| January | ..... | ..... | ..... | 200 | 12,298 |
| February | ..... | ..... | ..... | 140 | 7,775 |
| March | ..... | 610 | ..... | 327 | 20,107 |
| April | ..... | 1,330 | 550 | 666 | 39,630 |
| May | ..... | 2,220 | 550 | 877 | 53,925 |
| June | ..... | 3,060 | 580 | 1,550 | 92.232 |
| July | ..... | 2,330 | 550 | 1,010 | 62,103 |
| August | ..... | 550 | 433 | 511 | 31,421 |
| September | ..... | 710 | 435 | 542 | 32,252 |
| Water Year 1913-14 | ..... | 3,060 | 290 | 594 | 429,706 |
| **1914-15** | | | | | |
| October | ..... | 650 | 543 | 583 | 35,800 |
| November | ..... | 622 | ..... | 532 | 31,700 |
| December | ..... | ..... | ..... | 410 | 25,200 |
| January | ..... | ..... | ..... | 340 | 20,900 |
| February | ..... | ..... | ..... | 310 | 17,200 |
| March | ..... | ..... | ..... | 390 | 24,000 |
| April | ..... | 2,430 | 494 | 1,000 | 59,500 |
| May | ..... | 906 | 708 | 788 | 48,500 |
| June | ..... | 2,620 | 679 | 1,530 | 91,000 |
| July | ..... | 3,110 | 1,220 | 1,900 | 117,000 |
| August | ..... | 1,220 | 906 | 1,060 | 65,200 |
| September | ..... | 943 | 708 | 790 | 46,900 |
| Water Year 1914-15 | ..... | 3,110 | ..... | 805 | 502,900 |
| **1915-16** | | | | | |
| October | ..... | 836 | 739 | 794 | 48,800 |
| November 1-18 | ..... | 770 | 471 | 652 | 23,300 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 26-31 | ..... | 3,840 | 836 | 2,130 | 25,400 |
| April | ..... | 7,440 | 4,480 | 6,080 | 362,000 |
| May | ..... | 4,560 | 1,810 | 2,540 | 156,000 |
| June | ..... | 3,760 | 1,140 | 2,120 | 126,000 |
| July | ..... | 7,720 | 2,710 | 5,450 | 335,000 |
| August | ..... | 3,110 | 1,100 | 1,850 | 114,000 |
| September | ..... | 1,510 | 1,020 | 1,250 | 74,400 |
| Water Year 1915-16 | ..... | 7,440 | 471 | 267.5 | 1,264,900 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1916-17** | | | | | |
| October | ..... | 1,240 | 876 | 1,030 | 63,300 |
| November 1-17 | ..... | 876 | 424 | 746 | 25,200 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 26-31 | ..... | 4,640 | 784 | 3,100 | 36,900 |
| April | ..... | 5,200 | 2,130 | 3,180 | 189,000 |
| May | ..... | 2,800 | 976 | 1,810 | 111,000 |
| June | ..... | 976 | 486 | 722 | 43,000 |
| July | ..... | 486 | 231 | 330 | 20,300 |
| August | ..... | 231 | 92 | 144 | 8,850 |
| September | ..... | 142 | 42 | 90.4 | 5,380 |
| Water Year 1916-17 | ..... | 5,200 | 42 | 1,069.9 | 502,930 |
| **1917-18** | | | | | |
| October | ..... | 156 | 70 | 108 | 6,640 |
| November | ..... | 185 | 70 | 132 | 7,860 |
| December 1-17 | ..... | 156 | 70 | 105 | 3,540 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 700 | 299 | 376 | 22,400 |
| May | ..... | 750 | 272 | 445 | 27,400 |
| June | ..... | 570 | 272 | 440 | 26,200 |
| July | ..... | 342 | 153 | 251 | 15,400 |
| August | ..... | 265 | 134 | 186 | 11,400 |
| September | ..... | 143 | 78 | 116 | 6,900 |
| Water Year 1917-18 | ..... | 750 | 70 | 246.8 | 127,740 |
| **1918-19** | | | | | |
| October | ..... | 140 | 71 | 95.5 | 5,870 |
| November | ..... | 198 | 83 | 124 | 7,380 |
| December | ..... | 143 | 69 | 102 | 6,270 |
| January | ..... | 113 | 41 | 77.2 | 4,750 |
| February | ..... | 131 | 29 | 77.5 | 4,300 |
| March | ..... | 630 | 42 | 276 | 17,000 |
| April | ..... | 630 | 312 | 463 | 27,600 |
| May | ..... | 630 | 245 | 468 | 28,800 |
| June | ..... | 605 | 316 | 398 | 23,700 |
| July | ..... | 440 | 178 | 294 | 18,100 |
| August | ..... | 420 | 186 | 282 | 17,300 |
| September | ..... | 248 | 172 | 209 | 12,400 |
| Water Year 1918-19 | ..... | 630 | 29 | 240 | 173,470 |
| **1919-20** | | | | | |
| October | ..... | 245 | 90 | 189 | 11,600 |
| November | ..... | 320 | 192 | 252 | 15,000 |
| December | ..... | 228 | 55 | 154 | 9,470 |
| January | ..... | ..... | ..... | 155 | 9,530 |
| February | ..... | ..... | ..... | 150 | 8,630 |
| March | ..... | 6,120 | ..... | 1,680 | 103,000 |
| April | ..... | 2,270 | 440 | 888 | 52,800 |
| May | ..... | 1,120 | 655 | 929 | 57,100 |
| June | ..... | 1,690 | 945 | 1,220 | 72,600 |
| July | ..... | 1,370 | 555 | 960 | 59,000 |
| August | ..... | 605 | 400 | 498 | 30,600 |
| September | ..... | 580 | 400 | 458 | 27,300 |
| Water Year 1919-20 | ..... | 6,120 | 55 | 629 | 456,630 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1920-21** | | | | | |
| October | ..... | 485 | 440 | 466 | 28,700 |
| November | ..... | 485 | 300 | 414 | 24,600 |
| December | ..... | 462 | 192 | 305 | 18,800 |
| January | ..... | ..... | ..... | 220 | 13,500 |
| February | ..... | ..... | ..... | 240 | 13,300 |
| March | ..... | 890 | 280 | 480 | 29,500 |
| April | ..... | 1,970 | 475 | 738 | 43,900 |
| May | ..... | 645 | 452 | 513 | 31,500 |
| June | ..... | 1,150 | 303 | 613 | 36,500 |
| July | ..... | 303 | 159 | 254 | 15,600 |
| August | ..... | 284 | 102 | 183 | 11,300 |
| September | ..... | 344 | 48 | 140 | 8,330 |
| Water Year 1920-21 | ..... | 1,970 | 48 | 381 | 275,530 |
| **1921-22** | | | | | |
| October | ..... | 430 | 32 | 145 | 8,920 |
| November | ..... | 264 | ..... | 95.3 | 5,670 |
| December | ..... | ..... | ..... | 70 | 4,300 |
| January | ..... | ..... | ..... | 25 | 1,540 |
| February | ..... | ..... | ..... | 23 | 1,280 |
| March | ..... | 4,600 | ..... | 1,860 | 114,000 |
| April | ..... | 5,200 | 1,200 | 2,640 | 157,000 |
| May | ..... | 1,370 | 918 | 1,070 | 65,800 |
| June | ..... | 890 | 474 | 695 | 41,400 |
| July | ..... | 498 | 159 | 309 | 19,000 |
| August | ..... | 210 | 24 | 88.4 | 5,440 |
| September | ..... | 57 | 9 | 37.0 | 2,200 |
| Water Year 1921-22 | ..... | 5,200 | 9 | 590 | 426,550 |
| **1922-23** | | | | | |
| October | ..... | 57 | 24 | 40.4 | 2,480 |
| November | ..... | 144 | 39 | 96.4 | 5,740 |
| December | ..... | ..... | ..... | 55 | 3,380 |
| January | ..... | ..... | ..... | 45 | 2,770 |
| February | ..... | ..... | ..... | 30 | 1,670 |
| March | ..... | ..... | ..... | 55 | 3,380 |
| April | ..... | 2,650 | 68 | 1,100 | 65,500 |
| May | ..... | 725 | 365 | 544 | 33,400 |
| June | ..... | 3,960 | 144 | 861 | 51,200 |
| July | ..... | 2,720 | 144 | 533 | 32,800 |
| August | ..... | 132 | 60 | 91.2 | 5,610 |
| September | ..... | 102 | 30 | 68.2 | 4,060 |
| Water Year 1922-23 | ..... | 3,960 | 24 | 293 | 211,990 |
| **1923-24** | | | | | |
| October | ..... | 98 | 78 | 87.8 | 5,400 |
| November | ..... | 109 | 69 | 93.4 | 5,560 |
| December | ..... | 88 | 12 | 72.8 | 4,480 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 27-31 | ..... | 125 | 125 | 125 | 1,240 |
| April | ..... | 530 | 125 | 267 | 15,900 |
| May | ..... | 490 | 235 | 302 | 18,600 |
| June | ..... | 252 | 175 | 205 | 12,200 |
| July | ..... | 235 | 100 | 165 | 10,100 |
| August | ..... | 162 | 42 | 85.1 | 5,230 |
| September | ..... | 175 | 8 | 91.5 | 5,440 |
| Water Year 1923-24 | ..... | 530 | 8 | 151.5 | 84,150 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1924-25** | | | | | |
| October | ..... | 252 | 100 | 162 | 9,960 |
| November | ..... | 220 | 63 | 124 | 7,380 |
| December | ..... | 80 | 24 | 54.5 | 3,350 |
| January | ..... | 48 | 24 | 37.1 | 2,280 |
| February | ..... | 48 | 35 | 39.9 | 2,220 |
| March | ..... | 340 | 35 | 158 | 9,720 |
| April | ..... | 670 | 205 | 297 | 17,700 |
| May | ..... | 340 | 150 | 236 | 14,500 |
| June | ..... | 885 | 235 | 564 | 33,600 |
| July | ..... | 575 | 125 | 284 | 17,500 |
| August | ..... | 175 | 80 | 138 | 8,480 |
| September | ..... | 205 | 80 | 129 | 7,680 |
| Water Year 1924-25 | ..... | 885 | 24 | 185 | 134,370 |
| **1925-26** | | | | | |
| October | ..... | 254 | 66 | 147 | 9,040 |
| November | ..... | 144 | 66 | 117 | 6,960 |
| December | ..... | 102 | 41 | 64.2 | 3,950 |
| January | ..... | 51 | 38 | 48.3 | 2,970 |
| February | ..... | 83 | 38 | 62.7 | 3,480 |
| March | ..... | 1,600 | 83 | 474 | 29,100 |
| April | ..... | 534 | 223 | 352 | 20,900 |
| May | ..... | 288 | 144 | 204 | 12,500 |
| June | ..... | 254 | 122 | 172 | 10,200 |
| July | ..... | 122 | 27 | 57.6 | 3,540 |
| August | ..... | 122 | 18 | 47.9 | 2,950 |
| September | ..... | 102 | 18 | 55.3 | 3,290 |
| Water Year 1925-26 | ..... | 1,600 | 18 | 151 | 108,880 |
| **1926-27** | | | | | |
| October | ..... | 144 | 51 | 103 | 6,330 |
| November | ..... | 144 | 38 | 76.0 | 4,520 |
| December | ..... | 66 | 18 | 45.9 | 2,820 |
| January | ..... | 66 | 18 | 39.7 | 2,440 |
| February | ..... | 254 | 27 | 70.3 | 3,900 |
| March | ..... | 2,650 | 288 | 846 | 52,000 |
| April | ..... | 1,690 | 488 | 918 | 54,600 |
| May | ..... | 684 | 402 | 520 | 32,000 |
| June | ..... | 794 | 488 | 629 | 37,400 |
| July | ..... | 488 | 223 | 343 | 21,100 |
| August | ..... | 254 | 122 | 186 | 11,400 |
| September | ..... | 324 | 144 | 228 | 13,600 |
| Water Year 1926-27 | ..... | 2,650 | 18 | 335 | 242,110 |
| **1927-28** | | | | | |
| October | ..... | 288 | 168 | 208 | 12,800 |
| November | ..... | 223 | 122 | 174 | 10,400 |
| December | ..... | ..... | ..... | 92 | 5,660 |
| January | ..... | ..... | ..... | 97 | 5,960 |
| February | ..... | ..... | ..... | 86 | 4,950 |
| March | ..... | 3,840 | 102 | 951 | 58,500 |
| April | ..... | 1,520 | 288 | 499 | 29,700 |
| May | ..... | 534 | 254 | 371 | 22,800 |
| June | ..... | 974 | 168 | 295 | 17,600 |
| July | ..... | 444 | 144 | 294 | 18,100 |
| August | ..... | 128 | 48 | 78.2 | 4,810 |
| September | ..... | 212 | 74 | 113 | 6,720 |
| Water Year 1927-28 | ..... | 3,840 | 48 | 273 | 198,000 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1928-29** | | | | | |
| October | ..... | 212 | 74 | 136 | 8,360 |
| November | ..... | 212 | 108 | 153 | 9,100 |
| December | ..... | 152 | 108 | 123 | 7,560 |
| January | ..... | 108 | 60 | 75.6 | 4,650 |
| February | ..... | 90 | 38 | 70.3 | 3,900 |
| March | ..... | 4,440 | 74 | 1,420 | 87,300 |
| April | ..... | 670 | 374 | 513 | 30,500 |
| May | ..... | 420 | 248 | 357 | 22,000 |
| June | ..... | 248 | 108 | 174 | 10,400 |
| July | ..... | 108 | 38 | 75.2 | 4,620 |
| August | ..... | 30 | 20 | 23.3 | 1,430 |
| September | ..... | 38 | 16 | 24.6 | 1,460 |
| Water Year 1928-29 | ..... | 4,440 | 16 | 264 | 191,000 |
| **1929-30** | | | | | |
| October | ..... | 74 | 38 | 53.7 | 3,300 |
| November | ..... | 108 | 30 | 62.2 | 3,700 |
| December | ..... | 38 | 30 | 33.7 | 2,070 |
| January | ..... | 38 | 30 | 36.5 | 2,240 |
| February | ..... | 620 | 38 | 149 | 8,280 |
| March | ..... | 1,340 | 265 | 711 | 43,700 |
| April | ..... | 780 | 265 | 398 | 23,700 |
| May | ..... | 1,120 | 310 | 590 | 36,300 |
| June | ..... | 410 | 225 | 290 | 17,300 |
| July | ..... | 265 | 60 | 145 | 8,920 |
| August | ..... | 90 | 20 | 38.3 | 2,360 |
| September | ..... | 22 | 11 | 16.2 | 964 |
| Water Year 1929-30 | ..... | 1,340 | 11 | 211 | 153,000 |
| **1930-31** | | | | | |
| October | ..... | 48 | 13 | 30.5 | 1,880 |
| November | ..... | 61 | 26 | 37.7 | 2,240 |
| December | ..... | 32 | 16 | 24.6 | 1,510 |
| January | ..... | 30 | 13 | 21.1 | 1,300 |
| February | ..... | 102 | 28 | 39.3 | 2,180 |
| March | ..... | 207 | 90 | 128 | 7,870 |
| April | ..... | 365 | 118 | 190 | 11,300 |
| May | ..... | 295 | 101 | 168 | 10,300 |
| June | ..... | 275 | 33 | 132 | 7,860 |
| July | ..... | 130 | 21 | 64.8 | 3,980 |
| August | ..... | 33 | 7 | 20.8 | 1,280 |
| September | ..... | 141 | 2.1 | 15.6 | 928 |
| Water Year 1930-31 | ..... | 365 | 2.1 | 72.7 | 52,600 |
| **1931-32** | | | | | |
| October | ..... | 98 | 10 | 26.6 | 1,640 |
| November | ..... | 51 | 15 | 28 | 1,670 |
| December | ..... | 33 | 17 | 21.6 | 1,330 |
| January | ..... | 45 | 25 | 36.1 | 2,320 |
| February | ..... | 177 | 31 | 47.3 | 2,720 |
| March | ..... | 340 | 31 | 135 | 8,300 |
| April | ..... | 868 | 49 | 232 | 13,800 |
| May | ..... | 92 | 25 | 55.6 | 3,420 |
| June | ..... | 63 | 9.2 | 33.2 | 1,980 |
| July | ..... | 16 | ..... | 7.73 | 475 |
| August | ..... | 0 | 0 | 0 | 0 |
| September | ..... | 13 | 2.8 | 8.78 | 522 |
| Water Year 1931-32 | ..... | 868 | 0 | 52.4 | 38,177 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1932-33** | | | | | |
| October | ..... | 21 | 11 | 14.1 | 867 |
| November | ..... | 17 | 0 | 6.74 | 401 |
| December | ..... | 10 | 0 | 1.93 | 119 |
| January | ..... | 0 | 0 | 0 | 0 |
| February | ..... | 4 | 0 | 0.18 | 10 |
| March | ..... | 255 | 8 | 129 | 7,930 |
| April | ..... | 605 | 41 | 207 | 12,300 |
| May | ..... | 152 | 48 | 73.6 | 4,530 |
| June | ..... | 139 | 12 | 51.1 | 3,040 |
| July | ..... | 42 | .2 | 15.3 | 941 |
| August | ..... | 5.7 | 0 | 1.59 | 98 |
| September | ..... | 2.2 | 0 | .08 | 5 |
| Water Year 1932-33 | ..... | 605 | 0 | 41.7 | 30,200 |
| **1933-34** | | | | | |
| October | ..... | 11 | 0 | 4.72 | 290 |
| November | ..... | 10 | 0 | 2.49 | 148 |
| December | ..... | 30 | 1.3 | 13.3 | 819 |
| January | ..... | 19 | 9 | 14 | 859 |
| February | ..... | 36 | 13 | 20.5 | 1,140 |
| March | ..... | 62 | 18 | 43 | 2,640 |
| April | ..... | 323 | 22 | 102 | 6,070 |
| May | ..... | 35 | 0 | 8.12 | 499 |
| June | ..... | 27 | 0 | 3.31 | 197 |
| July | ..... | 0 | 0 | 0 | 0 |
| August | ..... | 0 | 0 | 0 | 0 |
| September | ..... | 0 | 0 | 0 | 0 |
| Water Year 1933-34 | ..... | 323 | 0 | 17.5 | 12,660 |
| **1934-35** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | 17.7 | 9.9 | 0 | .59 | 35 |
| December | 17.8 | 8.9 | 0 | .57 | 35 |
| January | 0 | 0 | 0 | 0 | 0 |
| February | 328 | 34 | 0 | 11.7 | 651 |
| March | 11,974 | 930 | 22 | 386 | 23,750 |
| April | 4,546 | 347 | 65 | 152 | 9,020 |
| May | 3,492 | 231 | 25 | 113 | 6,930 |
| June | 2,600.6 | 309 | 6.8 | 86.7 | 5,160 |
| July | 5,694 | 366 | 65 | 184 | 11,290 |
| August | 1,006.6 | 103 | 6.8 | 32.5 | 2,000 |
| September | 253.6 | 25 | .2 | 8.45 | 503 |
| Water Year 1934-35 | 29,930.3 | 930 | 0 | 82 | 59,370 |
| **1935-36** | | | | | |
| October | 151.4 | 11 | .2 | 4.88 | 300 |
| November | 57.3 | 7.8 | 0 | 1.91 | 114 |
| December | 18.2 | 8.9 | 0 | .59 | 36 |
| January | 431.8 | 18 | 7.8 | 1.39 | 856 |
| February | 168.4 | 8.9 | 2.6 | 5.81 | 334 |
| March | 4,999.5 | 695 | 8.9 | 161 | 9,920 |
| April | 12,841 | 1,050 | 125 | 428 | 25,470 |
| May | 2,688.9 | 165 | 1.5 | 86.7 | 5,330 |
| June | 86.2 | 9.9 | 0 | 2.87 | 171 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water Year 1935-36 | 21,442.7 | 1,050 | 0 | 58.6 | 42,530 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1936-37** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | 131.2 | 14 | 0 | 4.23 | 260 |
| January | 136.3 | 24 | 0 | 4.40 | 270 |
| February | 27.2 | 12 | 0 | .97 | 54 |
| March | 830.8 | 59 | 0 | 26.8 | 1,650 |
| April | 13,337 | 1,300 | 63 | 445 | 26,450 |
| May | 7,834 | 836 | 53 | 253 | 15,540 |
| June | 5,502 | 299 | 83 | 183 | 10,910 |
| July | 3,332 | 212 | 51 | 107 | 6,610 |
| August | 1,727 | 117 | 30 | 55.7 | 3,430 |
| September | 4,180 | 222 | 59 | 139 | 8,290 |
| Water Year 1936-37 | 37,037.5 | 1,300 | 0 | 101 | 73,460 |
| **1937-38** | | | | | |
| October | 2,758 | 165 | 44 | 89 | 5,470 |
| November | 1,769.2 | 158 | .2 | 59 | 3,510 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | 165.5 | 12 | ..... | 5.34 | 328 |
| February | 417.3 | 22 | 8.1 | 14.9 | 828 |
| March | 7,329 | 606 | 21 | 236 | 14,540 |
| April | 4,909 | 383 | 123 | 164 | 9,740 |
| May | 13,197 | 1,160 | 300 | 426 | 26,180 |
| June | 9,902 | 502 | 184 | 330 | 19,640 |
| July | 3,067 | 244 | 24 | 98.9 | 6,080 |
| August | 574.5 | 37 | 7.3 | 18.5 | 1,140 |
| September | 1,731.7 | 226 | 3.8 | 57.7 | 3,430 |
| Water Year 1937-38 | 45,820.2 | 1,160 | 0 | 126 | 90,890 |
| **1938-39** | | | | | |
| October | 900 | 54 | 18 | 29 | 1,790 |
| November | 574 | 32 | 8 | 19.1 | 1,140 |
| December | 675 | 40 | 14 | 21.8 | 1,340 |
| January | 2,910 | 132 | 40 | 93.9 | 5,770 |
| February | 2,747 | 106 | 76 | 98.1 | 5,450 |
| March | 22,917 | 3,600 | 101 | 739 | 45,450 |
| April | 21,169 | 3,600 | 231 | 706 | 41,990 |
| May | 6,604 | 274 | 158 | 213 | 13,100 |
| June | 3,911 | 244 | 49 | 130 | 7,760 |
| July | 2,646 | 279 | 24 | 85.4 | 5,250 |
| August | 372.0 | 28 | 0 | 12 | 738 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water Year 1938-39 | 65,425 | 3,600 | 0 | 179 | 129,800 |
| **1939-40** | | | | | |
| October | 305.4 | 21 | 0 | 9.85 | 606 |
| November | 521 | 21 | 12 | 17.4 | 1,030 |
| December | 433.5 | 18 | 6 | 14 | 860 |
| January | 33.5 | 5.5 | ..... | 1.08 | 66 |
| February | 248.6 | 20 | 0 | 8.57 | 493 |
| March | 1,242 | 57 | 18 | 40.1 | 2,460 |
| April | 13,399 | 970 | 55 | 447 | 26,580 |
| May | 11,917 | 546 | 193 | 384 | 23,640 |
| June | 5,564 | 407 | 53 | 185 | 11,040 |
| July | 469.1 | 55 | 0 | 15.1 | 930 |
| August | 99.3 | 20 | 0 | 3.20 | 197 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water Year 1939-40 | 34,232.4 | 970 | 0 | 93.5 | 67,902 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1940-41** | | | | | |
| October | 177 | 24 | 0 | 5.71 | 351 |
| November | 1,049 | 82 | 10 | 35 | 2,080 |
| December | 1,168 | 46 | 30 | 37.7 | 2,320 |
| January | 1,323 | 58 | 26 | 42.7 | 2,620 |
| February | 2,436 | 127 | 58 | 87 | 4,830 |
| March | 7,824 | 1,040 | 89 | 252 | 15,520 |
| April | 19,328 | 1,390 | 355 | 644 | 38,340 |
| May | 10,057 | 402 | 178 | 324 | 19,950 |
| June | 14,560 | 1,290 | 166 | 485 | 28,880 |
| July | 4,031 | 310 | 54 | 130 | 8,000 |
| August | 784 | 45 | 6.6 | 25.3 | 1,560 |
| September | 2,445 | 136 | 39 | 81.5 | 4,850 |
| Water Year 1940-41 | 65.182 | 1,390 | 0 | 179 | 129,300 |
| **1941-42** | | | | | |
| October | 2,855 | 185 | 69 | 93.1 | 5,720 |
| November | 3,752 | 175 | 78 | 125 | 7,440 |
| December | 3,043 | 127 | 67 | 98.2 | 6,040 |
| January | 3,476 | 156 | 78 | 112 | 6,890 |
| February | 3,073 | 139 | 67 | 110 | 6,100 |
| March | 5,889 | 504 | 80 | 190 | 11,680 |
| April | 9,767 | 702 | 99 | 326 | 19,370 |
| May | 40,267 | 2,130 | 614 | 1,299 | 79,870 |
| June | 49,937 | 3,330 | 863 | 1,665 | 99,050 |
| July | 30,654 | 1,120 | 702 | 989 | 60,800 |
| August | 14,566 | 968 | 310 | 470 | 28,890 |
| September | 18,246 | 733 | 452 | 608 | 36,190 |
| Water Year 1941-42 | 185,555 | 3,330 | 67 | 508 | 368,040 |
| **1942-43** | | | | | |
| October | 16,441 | 643 | 427 | 530 | 32,610 |
| November | 12,950 | 531 | 273 | 432 | 25,690 |
| December | 9,736 | 355 | 234 | 314 | 19,310 |
| January | 9,886 | 355 | 280 | 319 | 19,610 |
| February | 7,617 | 307 | 210 | 272 | 15,110 |
| March | 14,371 | 3,380 | 269 | 464 | 28,500 |
| April | 193,860 | 18,000 | 1,590 | 6,462 | 384,500 |
| May | 57,650 | 2,370 | 1,590 | 1,860 | 114,300 |
| June | 84,100 | 3,880 | 2,130 | 2,803 | 166,800 |
| July | 54,712 | 4,240 | 580 | 1,765 | 108,500 |
| August | 23,895 | 1,390 | 506 | 771 | 47,400 |
| September | 12,846 | 530 | 329 | 428 | 25,480 |
| Water Year 1942-43 | 498,064 | 18,000 | 210 | 1,365 | 987,800 |
| **1943-44** | | | | | |
| October | 12,929 | 459 | 336 | 401 | 24,650 |
| November | 11,137 | 482 | 250 | 371 | 22,090 |
| December | 9,005 | 409 | 178 | 290 | 17,860 |
| January | 6,268 | 246 | 140 | 202 | 12,430 |
| February | 4,733 | 211 | 116 | 163 | 9,390 |
| March | 7,914 | 553 | 140 | 255 | 15,700 |
| April | 26,046 | 1,490 | 387 | 868 | 51,660 |
| May | 37,080 | 1,910 | 687 | 1,196 | 73,550 |
| June | 63,842 | 4,120 | 659 | 213 | 126,600 |
| July | 62,404 | 3,740 | 715 | 2,013 | 123,800 |
| August | 21,368 | 1,390 | 409 | 689 | 42,380 |
| September | 23,094 | 1,120 | 659 | 770 | 45,800 |
| Water Year 1943-44 | 285,320 | 4,120 | 116 | 780 | 565,900 |

## SHEYENNE RIVER AT SHEYENNE, NORTH DAKOTA

Location: Staff gage lat. 47°50′20″, long. 99°07′30″, in NE¼ sec. 5, T. 150 N., R. 66W at recreation-pond dam 1 mile north of Sheyenne.

Drainage Area: 1,980 square miles.

Records Available: April 1929 to June 1933, October 1939 to September 1944.

Extremes: Maximum discharge 1,140 second-feet April 15, 1942; no flow during parts of most years.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1928-29** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 26-30 | 39.2 | ..... | ..... | 7.84 | 77.8 |
| May | 341.3 | 41 | 5.5 | 11 | 676 |
| June | 303.4 | 37 | 1 | 10.1 | 601 |
| July | 8 | ..... | ..... | .258 | 15.9 |
| August | 1.6 | ..... | ..... | .052 | 3.2 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water Year 1928-29 | 693.5 | ..... | ..... | ..... | 1,370 |
| **1929-30** | | | | | |
| October | 3.5 | ..... | ..... | .113 | 6.9 |
| November | 98.6 | 5.5 | ..... | 3.29 | 196 |
| December | 15.5 | ..... | ..... | .50 | 30.7 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | 6,087 | 990 | ..... | 217 | 12,100 |
| March | 7,654 | 425 | 114 | 247 | 15,200 |
| April | 1,430 | 114 | 13 | 47.7 | 2,840 |
| May | 792 | 56 | 9 | 25.5 | 1,570 |
| June | 47.9 | 7 | ..... | 1.6 | 95.2 |
| July | 6.9 | ..... | ..... | .2 | 12.3 |
| August | 1.5 | ..... | ..... | .05 | 3.07 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1929-30 | 16,136.2 | 990 | ..... | 44.2 | 32,054.17 |
| **1930-31** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 23-31 | 45 | ..... | ..... | 5 | 89 |
| April | 801 | 58 | 2.6 | 26.7 | 1,590 |
| May | 67.9 | 3.4 | .7 | 2.19 | 135 |
| June | 10.5 | 1.1 | ..... | .35 | 21 |
| July | 10.5 | 1.3 | ..... | .34 | 21 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1930-31 | 934.9 | | | | 1,860 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1931-32** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 905 | ..... | ..... | 29.2 | 1,800 |
| April | 937.7 | 73 | 4.9 | 31.3 | 1,860 |
| May | 304.1 | 30 | 2.5 | 9.81 | 603 |
| June | 263 | 19 | 1.9 | 8.77 | 522 |
| July 1-15 | 18.7 | 2.3 | .6 | 1.25 | 37 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1931-32 | 2,428.5 | ..... | ..... | ..... | 4,820 |
| **1932-33** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | 245.2 | 161 | ..... | 8.76 | 487 |
| March | 3.457 | 296 | 38 | 112 | 6,890 |
| April | 2,531 | 214 | 23 | 84.4 | 5,020 |
| May | 234.7 | 18 | .9 | 7.57 | 465 |
| June | 10.6 | 1.4 | ..... | .35 | 21 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1932-33 | 6,478.5 | | | | 12,900 |
| Discontinued June 30th | | | | | |
| **1939-40** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 5,781 | 57 | ..... | 19.3 | 1,150 |
| May | 3,809 | 26 | 3.7 | 12.3 | 756 |
| June | 503 | 44 | ..... | 1.68 | 100 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1939-40 | 1,009.3 | 57 | 0 | 2.76 | 2,006 |
| **1940-41** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 1,537 | 647 | | 49.6 | 3,049 |
| April | 7,874 | 796 | 17 | 262 | 15,620 |
| May | 389.2 | 27 | 6 | 12.6 | 772 |
| June | 122.8 | 17 | .8 | 4.09 | 244 |
| July | 196.8 | 16 | ..... | 6.35 | 390 |
| August | 29 | 5 | ..... | .94 | 58 |
| September | 624 | 40 | 1 | 20.8 | 1,238 |
| Water year 1940-41 | 10,772.8 | 796 | ..... | 29.5 | 21,370 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1941-42** | | | | | |
| October | 186 | ..... | ..... | 6 | 369 |
| November | 170 | ..... | ..... | 5.67 | 337 |
| December | 100.6 | ..... | 1.5 | 3.25 | 200 |
| January | 21 | ..... | ..... | .68 | 42 |
| February | 14 | ..... | ..... | .5 | 28 |
| March | 372 | 27 | ..... | 12 | 738 |
| April | 6,416 | 1,140 | 11 | 214 | 12,730 |
| May | 1,303 | 77 | 21 | 42 | 2,580 |
| June | 753.2 | 41 | 5.4 | 25.1 | 1,490 |
| July | 287.4 | 41 | 2 | 9.27 | 570 |
| August | 746 | 123 | 11 | 24.1 | 1,480 |
| September | 119.9 | 14 | .5 | 4 | 238 |
| Water year 1941-42 | 10,489.1 | 1,140 | 0 | 28.7 | 20,800 |
| **1942-43** | | | | | |
| October | 94.6 | 54 | 1.1 | 3.05 | 188 |
| November | 49.1 | 3.3 | .7 | 1.64 | 97 |
| December | 16.9 | .7 | .4 | .55 | 34 |
| January | 6 | ..... | ..... | .19 | 12 |
| February | 2.6 | ..... | ..... | .09 | 5.2 |
| March | 7,036.5 | 1,100 | ..... | 227 | 13.960 |
| April | 5,313 | 750 | 12 | 177 | 10,540 |
| May | 1,084 | 75 | 16 | 35 | 2,150 |
| June | 1,445 | 100 | 17 | 48.2 | 2,870 |
| July | 266.9 | 21 | .6 | 8.61 | 529 |
| August | 5.6 | 1.5 | ..... | .18 | 11 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1942-43 | 15,320.2 | 1,100 | | 42 | 30,400 |
| **1943-44** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 9 | ..... | 0 | .29 | 18 |
| April | 242.7 | 15 | 2.2 | 8.09 | 481 |
| May | 1,813.3 | 321 | .2 | 58.5 | 3,600 |
| June | 921 | 76 | 15 | 30.7 | 1,830 |
| July | 269.9 | 25 | 0 | 8.71 | 535 |
| August | 343.5 | 203 | 0 | 11.1 | 681 |
| September | 1,202 | 409 | .2 | 40.1 | 2,380 |
| Water year 1943-44 | 4,801.4 | 409 | 0 | 13.1 | 9,520 |

## SHEYENNE RIVER AT VALLEY CITY, NORTH DAKOTA

Location: Water stage recorder and concrete control. lat. 46°55′, long. 98°01′, in SE¼NW¼ sec. 28, T. 140 N., R. 58W, about 100 feet downstream from College dam in Valley City, and 15 miles downstream from mouth of Baldhill Creek

Drainage area: 8,360 square miles (includes 3,940 sq. mi. in closed Devils Lake Basin).

Records available: March to August 1919 and March 1938 to September 1944

Extremes: Maximum discharge, 2,750 second-feet April 18, 1919; no flow during several periods in 1938-41.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1918-19 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 24-31 | ..... | 445 | 100 | 219 | 3,480 |
| April | ..... | 2,750 | 630 | 1,580 | 94,000 |
| May 1-22 | ..... | 1,020 | 275 | 405 | 24,900 |
| June 12-30 | ..... | 260 | 107 | 198 | 11,800 |
| July | ..... | ..... | ..... | ..... | 5,770 |
| August | ..... | ..... | ..... | ..... | 1,860 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1918-19 | | | | | 141,810 |

| Month | Run-off in Acre-Feet 1919-1920 | 1920-1921 |
|---|---|---|
| October | ..... | ..... |
| November | ..... | ..... |
| December | ..... | ..... |
| January | ..... | ..... |
| February | ..... | ..... |
| March | 20,000 | 193 |
| April | 49,800 | 8,930 |
| May | 6,300 | 2,460 |
| June | ..... | 1,020 |
| July | ..... | ..... |
| August | ..... | ..... |
| September | ..... | ..... |
| Water Year | 76,100 | 12,603 |

Recording suspended

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1937-38 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 18-31 | 1,672 | 244 | 60 | 119 | 3,320 |
| April | 1,358 | 131 | 20 | 45.3 | 2,690 |
| May | 825 | 36 | 15 | 26.6 | 1,640 |
| June | 253 | 29 | 2.2 | 8.43 | 502 |
| July | 1,635.9 | 131 | 4.2 | 52.8 | 3,240 |
| August | 267.7 | 41 | ..... | 8.64 | 531 |
| September | 3.9 | .7 | ..... | .13 | 7.7 |
| Water year 1937-38 | 6,015.5 | | | | 11,930.7 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1938-39** | | | | | |
| October | 6.9 | .7 | ..... | .22 | 14 |
| November | 6.4 | .5 | ..... | .21 | 13 |
| December | 4.9 | .4 | .1 | .16 | 9.7 |
| January | 7.8 | .4 | .1 | .25 | 15 |
| February | 9.3 | 1.4 | ..... | .33 | 18 |
| March | 2,098 | 240 | .7 | 67.7 | 4,160 |
| April | 3,434 | 293 | 41 | 114 | 6,810 |
| May | 655 | 39 | 11 | 21.1 | 1,300 |
| June | 437.9 | 28 | 5.8 | 14.6 | 869 |
| July | 51 | 7.2 | ..... | 1.65 | 101 |
| August | .8 | .2 | ..... | .03 | 1.6 |
| September | .3 | .2 | ..... | .01 | .6 |
| Water year 1938-39 | 6,712.3 | 293 | | 18.4 | 13,310 |
| **1939-40** | | | | | |
| October | 1.5 | .7 | ..... | .05 | 3 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 5,162 | 484 | ..... | 172 | 10,240 |
| May | 1,921 | 98 | 32 | 62 | 3,810 |
| June | 255.1 | 28 | .1 | 8.5 | 506 |
| July | 9.8 | 8.4 | ..... | .32 | 19 |
| August | 53.4 | 9.1 | ..... | 1.72 | 106 |
| September | 1.9 | .2 | ..... | .06 | 4 |
| Water year 1939-40 | 7,404.7 | 484 | | 20.2 | 14,688 |
| **1940-41** | | | | | |
| October | 1.5 | .6 | ..... | .05 | 3 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | .5 | .1 | ..... | .02 | 1 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 2,106.9 | 700 | ..... | 68 | 4,180 |
| April | 28,600 | 1,590 | 193 | 953 | 56,730 |
| May | 3,622 | 324 | 50 | 117 | 7,180 |
| June | 3,950 | 183 | 75 | 132 | 7,830 |
| July | 1,854 | 123 | 16 | 59.8 | 3,680 |
| August | 559.5 | 126 | 2.6 | 18 | 1,110 |
| September | 1,332.2 | 177 | 7 | 44.4 | 2,640 |
| Water year 1940-41 | 42,026.6 | 1,590 | 0 | 115 | 83,350 |
| **1941-42** | | | | | |
| October | 1,609 | 62 | 35 | 51.9 | 3,190 |
| November | 1,166 | 49 | 26 | 38.9 | 2,310 |
| December | 670.5 | 34 | 8.5 | 21.6 | 1,330 |
| January | 124.9 | 8 | .5 | 4.03 | 248 |
| February | 146.2 | 6.5 | 3.8 | 5.22 | 290 |
| March | 826.4 | 118 | 3.8 | 26.7 | 1,640 |
| April | 22,097 | 1,190 | 125 | 737 | 43,830 |
| May | 7,423 | 380 | 155 | 239 | 14,720 |
| June | 4,888 | 435 | 77 | 163 | 9,700 |
| July | 1,727 | 93 | 29 | 55.7 | 3,430 |
| August | 1,535 | 178 | 22 | 49.5 | 3,040 |
| September | 1,368 | 95 | 28 | 45.6 | 2,710 |
| Water year 1941-42 | 43,581 | 1,190 | .5 | 119 | 86,440 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre Feet |
|---|---|---|---|---|---|
| 1942-43 | | | | | |
| October | 75.2 | 42 | 2.2 | 25 | 1,540 |
| November | 716 | 29 | 16 | 23.9 | 1,420 |
| December | 333.5 | 14 | 8.5 | 10.8 | 661 |
| January | 296.5 | 12 | 6.5 | 9.56 | 588 |
| February | 560 | 100 | 6 | 20 | 1,110 |
| March | 14,571.5 | 1,900 | 8 | 470 | 28,900 |
| April | 27,125 | 1,900 | 186 | 904 | 53,800 |
| May | 5,784 | 266 | 120 | 187 | 11,470 |
| June | 12,203 | 693 | 202 | 407 | 24,200 |
| July | 4,051 | 188 | 84 | 131 | 8,040 |
| August | 1,230 | 89 | 18 | 39.7 | 2,440 |
| September | 240 | 18 | 2.4 | 8 | 476 |
| Water year 1942-43 | 67,885.7 | 1,900 | 2.2 | 186 | 134,600 |
| 1943-44 | | | | | |
| October | 112.7 | 16 | .3 | 3.64 | 224 |
| November | 565 | 22 | 15 | 18.8 | 1,120 |
| December | 370.8 | 20 | 5 | 12 | 735 |
| January | 119.8 | 5 | 2.4 | 3.86 | 238 |
| February | 131.3 | 5.3 | 3.4 | 4.53 | 260 |
| March | 482.3 | 52 | 4.6 | 15.6 | 957 |
| April | 3,273 | 167 | 21 | 109 | 6,490 |
| May | 2,298 | 173 | 52 | 74.1 | 4,560 |
| June | 4,843 | 357 | 74 | 161 | 9,610 |
| July | 1,940 | 179 | 11 | 62.6 | 3,850 |
| August | 2,311 | 199 | 10 | 74.5 | 4,580 |
| September | 2,999 | 230 | 31 | 100 | 5,950 |
| Water year 1943-44 | 19,445.9 | 357 | .3 | 53.1 | 38,570 |

## MAPLE RIVER AT MAPLETON, NORTH DAKOTA

Location: Wire-weight gage at loose rock dam, lat. 46°53′20″, long. 97°03′20″, in NE¼NE¼ sec. 1, T. 139N., R, 51W., in Mapleton and 10.5 miles upstream from mouth.

Drainage: 1,480 square miles:

Records available: April to September 1944

Extremes: Maximum daily discharge during period, 150 second-feet Apr. 9, May 22: maximum gage height observed, 8.16 feet April 8; minimum observed 2.0 second-feet, Aug. 2.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1943-44 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 6-30 | 1,732 | 150 | 30 | 69.3 | 3,440 |
| May | 1,746 | 150 | 30 | 56.3 | 3,460 |
| June | 697.1 | 60 | 4 | 23.2 | 1,380 |
| July | 398.9 | 30 | 3.4 | 12.9 | 791 |
| August | 399.8 | 35 | 2.1 | 12.9 | 793 |
| September | 298.6 | 22 | 4 | 9.95 | 592 |
| Water year 1943-44 | ..... | ..... | ..... | ..... | 10,460 |

## SHEYENNE RIVER AT HAGGART, NORTH DAKOTA

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1901-02** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 29-31 | ..... | 1,204 | 840 | 994 | 5,915 |
| April | ..... | 2,030 | 616 | 1,492 | 88,780 |
| May | ..... | 644 | 299 | 535 | 32,896 |
| June | ..... | 448 | 124 | 262 | 15,590 |
| July | ..... | 158 | 67 | 106 | 6,518 |
| August | ..... | 113 | 53 | 82 | 5,042 |
| September | ..... | 113 | 67 | 84 | 4,998 |
| Water year 1901-02 | | | | | 159,739 |
| **1902-03** | | | | | |
| October | ..... | 146 | 53 | 92 | 5,657 |
| November 1-8 | ..... | 103 | 93 | 97 | 1,539 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 8-30 | ..... | 1,568 | 406 | 1,003 | 45,757 |
| May | ..... | 1,120 | 158 | 369 | 22,689 |
| June | ..... | 299 | 84 | 163 | 9,699 |
| July | ..... | 146 | 47 | 80 | 4,919 |
| August | ..... | 67 | 19 | 46 | 2,828 |
| September | ..... | 113 | 53 | 82 | 4,879 |
| Water year 1902-03 | | | | | 97,967 |
| **1903-04** | | | | | |
| October | ..... | 124 | 53 | 99 | 6,087 |
| November | ..... | 146 | 67 | 100 | 2,777 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 1,974 | 1,036 | 1,553 | 92,410 |
| May | ..... | 1,946 | 368 | 1,043 | 64,130 |
| June | ..... | 654 | 285 | 420 | 24,990 |
| July | ..... | 296 | 130 | 217 | 13,340 |
| August | ..... | 130 | 36 | 88 | 5,411 |
| September | ..... | 112 | 32 | 85.1 | 5,064 |
| Water year 1903-04 | | | | | 214,209 |
| **1904-05** | | | | | |
| October | ..... | 148 | 80 | 93.2 | 5,731 |
| November | ..... | 103 | 80 | 91.3 | 5,433 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 3-30 | ..... | 385 | 113 | 201 | 11,200 |
| May | ..... | 814 | 96 | 326 | 20,000 |
| June | ..... | 333 | 169 | 206 | 12,300 |
| July | ..... | 398 | 88 | 177 | 10,900 |
| August | ..... | 684 | 104 | 303 | 18,000 |
| September | ..... | 159 | 80 | 120 | 7,140 |
| Water year 1904-05 | | | | | 90,704 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1905-06** | | | | | |
| October | ..... | 104 | 65 | 79.7 | 4,900 |
| November | ..... | 96 | ..... | 76.5 | 4,550 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 1,060 | 346 | 682 | 40,600 |
| May | ..... | 476 | 169 | 311 | 19,100 |
| June | ..... | 411 | 245 | 295 | 17,600 |
| July | ..... | 257 | 113 | 162 | 9,960 |
| August | ..... | 169 | 51 | 104 | 6,400 |
| September | ..... | 65 | 32 | 47.5 | 2,830 |
| Water year 1905-06 | | | | | 105,940 |
| **1906-07** | | | | | |
| October | ..... | 51 | 44 | 44.9 | 2,760 |
| November | ..... | 58 | 44 | 52.6 | 3,130 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | ..... | 359 | 592 | 35,200 |
| May | ..... | 632 | 281 | 442 | 27,200 |
| June | ..... | 320 | 211 | 255 | 15,200 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1906-07 | | | | | 83,490 |

Readings Suspended.

| | | | | | |
|---|---|---|---|---|---|
| **1918-19** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 21-31 | ..... | 790 | 60 | 298 | 6,500 |
| April | ..... | 2,220 | 965 | 1,570 | 93,400 |
| May | ..... | 1,860 | 391 | 784 | 48,200 |
| June | ..... | ..... | ..... | 305 | 18,100 |
| July | ..... | 258 | 116 | 175 | 10,800 |
| August | ..... | 86 | 52 | 67.6 | 4,160 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1918-19 | | | | | 181,100 |

Discontinued

| Month | Run-off in Acre-Feet | |
|---|---|---|
| | 1919-1920 | 1920-1921 |
| October | ..... | ..... |
| November | ..... | ..... |
| December | ..... | ..... |
| January | ..... | ..... |
| February | ..... | ..... |
| March | 15,500 | 8,628 |
| April | 56,760 | 22,400 |
| May | 18,460 | 9,410 |
| June | 5,150 | 18,600 |
| July | ..... | ..... |
| August | ..... | ..... |
| September | ..... | ..... |
| Water year | 95,870 | 59,038 |

## SHEYENNE RIVER AT WEST FARGO, NORTH DAKOTA

Location: Water stage recorder, lat. 46°53'20", long. 96°54'55", in sec. 31, T. 140 N., R. 49 W. half a mile north of West Fargo and 3 miles upstream from Maple River

Drainage Area: 9,460 square miles (revised includes 3,940 square miles in closed Devils L. basin).

Records Available: September 1929 to September 1944; March 1902 to June 1907 and March to August 1919 at site a quarter of a mile upstream.

Average discharge: 15 years, 103 second-feet.

Extremes: Maximum discharge 2,400 second-feet April 7-10, 1943; minimum 2 second-feet Dec. 14, 1936.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1929-30 | | | | | |
| October 17-30 | 1,016 | 46 | 24 | 32.8 | 2,020 |
| November | 1,000 | 46 | 15 | 33.3 | 1,980 |
| December | 621 | 30 | 15 | 20 | 1,230 |
| January | 539 | 27 | 14 | 17.4 | 1,070 |
| February | 1,729 | 438 | 11 | 61.8 | 3,430 |
| March | 25,990 | 1,470 | 330 | 838 | 51,500 |
| April | 20,267 | 1,780 | 224 | 676 | 40,200 |
| May | 8,341 | 320 | 197 | 269 | 16,500 |
| June | 3,716 | 251 | 64 | 124 | 7,380 |
| July | 1,482 | 60 | 36 | 47.8 | 2,940 |
| August | 833 | 34 | 22 | 26.9 | 1,650 |
| September | 711 | 28 | 18 | 23.7 | 1,410 |
| Water year 1929-30 | 66,244 | 1,780 | 11 | 181 | 131,310 |
| 1930-31 | | | | | |
| October | 715 | 28 | 17 | 23 | 1,410 |
| November | 984 | 61 | 21 | 32.8 | 1,950 |
| December | 709 | 44 | 12 | 22.9 | 1,410 |
| January | 398 | 30 | 6 | 12.8 | 787 |
| February | 1,433 | 159 | 6 | 51.2 | 2,840 |
| March | 3,796 | 342 | ..... | 122 | 7,500 |
| April | 6,847 | 390 | 132 | 228 | 7,500 |
| May | 2,623 | 129 | 64 | 84.6 | 5,200 |
| June | 3,522 | 320 | 54 | 117 | 6,960 |
| July | 967 | 56 | 15 | 31.2 | 1,920 |
| August | 672 | 42 | 15 | 21.7 | 1,330 |
| September | 548 | 20 | 17 | 18.3 | 1,090 |
| Water year 1930-31 | 23,212 | 390 | 6 | 63.6 | 45,997 |
| 1931-32 | | | | | |
| October | 643 | 33 | 16 | 20.7 | 1,270 |
| November | 1,189 | 47 | 31 | 39.6 | 2,360 |
| December | 1,069 | 51 | 20 | 34.5 | 2,120 |
| January | 791 | 37 | 19 | 25.5 | 1,570 |
| February | 604 | 35 | 13 | 20.8 | 1,200 |
| March | 6,939 | 412 | 35 | 224 | 13,800 |
| April | 16,534 | 1,040 | 179 | 551 | 32,800 |
| May | 4,460 | 301 | 87 | 144 | 8,850 |
| June | 3,847 | 312 | 102 | 128 | 7,620 |
| July | 1,846 | 97 | 31 | 59.5 | 3,660 |
| August | 942 | 36 | 25 | 30.4 | 1,870 |
| September | 633 | 32 | 17 | 21.1 | 1,260 |
| Water year 1931-32 | 39,497 | 1,040 | 13 | 108 | 78,380 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1932-33** | | | | | |
| October | 658 | 31 | 15 | 21.2 | 1,300 |
| November | 1.034 | 43 | 31 | 34.5 | 2,050 |
| December | 650 | 30 | 14 | 21 | 1,290 |
| January | 497 | ..... | ..... | 16 | 984 |
| February | 440 | 32 | ..... | 15.7 | 872 |
| March | 12,883 | 680 | 41 | 416 | 25,600 |
| April | 12,045 | 616 | 206 | 402 | 23,900 |
| May | 5,481 | 268 | 113 | 177 | 10,900 |
| June | 2,046 | 113 | 34 | 68.3 | 4,060 |
| July | 1,221 | 77 | 23 | 39.4 | 2,420 |
| August | 550 | 37 | 12 | 17.7 | 1,090 |
| September | 359.4 | 20 | 7.2 | 12 | 714 |
| Water year 1932-33 | 37,864.4 | 680 | 7.2 | 104 | 75,200 |
| **1933-34** | | | | | |
| October | 370.4 | 18 | 8 | 11.9 | 735 |
| November | 515 | 27 | 13 | 17.2 | 1,020 |
| December | 416 | 20 | 10 | 13.4 | 825 |
| January | 310 | 10 | 10 | 10 | 615 |
| February | 380 | 17 | 11 | 13.6 | 754 |
| March | 2,018 | 221 | 19 | 65.1 | 4,000 |
| April | 6,020 | 312 | 92 | 201 | 11,940 |
| May | 1,742 | 95 | 24 | 56.2 | 3,460 |
| June | 757 | 34 | 20 | 25.2 | 1,500 |
| July | 455 | 31 | 6.8 | 14.7 | 902 |
| August | 298.8 | 27 | 4.6 | 9.64 | 593 |
| September | 268.4 | 14 | 4.8 | 8.95 | 532 |
| Water year 1933-34 | 13,551.6 | 312 | 4.6 | 37.1 | 26,880 |
| **1934-35** | | | | | |
| October | 529 | 24 | 11 | 17.1 | 1,050 |
| November | 485 | 21 | ..... | 16.2 | 962 |
| December | 304.2 | 12 | 7.4 | 9.81 | 603 |
| January | 282 | 12 | 6.8 | 9.1 | 559 |
| February | 427.4 | 33 | 8.2 | 15.3 | 848 |
| March | 3,686 | 285 | 39 | 119 | 7,310 |
| April | 5,354 | 268 | 97 | 178 | 10,620 |
| May | 3,294 | 156 | 69 | 106 | 6,530 |
| June | 2,794 | 176 | 44 | 93.1 | 5,540 |
| July | 3,357 | 211 | 46 | 108 | 6,660 |
| August | 4,233 | 274 | 64 | 137 | 8,400 |
| September | 1,025 | 60 | 20 | 34.2 | 2,030 |
| Water year 1934-35 | 25,770.6 | 285 | 68 | 70.6 | 51,110 |
| **1935-36** | | | | | |
| October | 822 | 40 | 21 | 26.5 | 1,630 |
| November | 543 | 22 | 15 | 18.1 | 1,080 |
| December | 605 | 21 | 18 | 19.5 | 1,200 |
| January | 500 | 18 | 14 | 16.1 | 992 |
| February | 425 | 15 | 14 | 14.7 | 843 |
| March | 1,645 | 241 | 14 | 53.1 | 3,260 |
| April | 9,256 | 718 | 74 | 309 | 18,360 |
| May | 6,202 | 552 | 77 | 200 | 12,300 |
| June | 1,650 | 114 | 25 | 55 | 3,270 |
| July | 704.6 | 77 | 8.5 | 22.7 | 1,400 |
| August | 231.3 | 12 | 5 | 7.46 | 459 |
| September | 251 | 14 | 5.4 | 8.37 | 498 |
| Water year 1935-36 | 22,834.9 | 718 | 5 | 62.4 | 45,292 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1936-37** | | | | | |
| October | 306.2 | 16 | 4.8 | 9.88 | 607 |
| November | 371.1 | 17 | 4.8 | 12.4 | 736 |
| December | 231.8 | 30 | 2.2 | 7.48 | 460 |
| January | 241 | 12 | 4 | 7.77 | 478 |
| February | 153.1 | 8.2 | 3 | 5.47 | 304 |
| March | 1,136 | 124 | 4.4 | 36.6 | 2,250 |
| April | 5,858 | 443 | 63 | 195 | 11,620 |
| May | 3,157 | 191 | 52 | 102 | 6,260 |
| June | 3,095 | 187 | 55 | 103 | 6,140 |
| July | 1,139 | 67 | 24 | 36.7 | 2,260 |
| August | 687.5 | 49 | 7.6 | 22.2 | 1,360 |
| September | 640 | 49 | 10 | 21.3 | 1,270 |
| Water year 1936-37 | 17,015.7 | 443 | 2.2 | 46.6 | 33,745 |
| **1937-38** | | | | | |
| October | 417.5 | 19 | 9 | 13.5 | 828 |
| November | 495 | 20 | 12 | 16.5 | 982 |
| December | 351.4 | 15 | 8.8 | 11.3 | 687 |
| January | 372 | 17 | 9.6 | 12 | 738 |
| February | 362 | 18 | 10 | 12.9 | 718 |
| March | 2,905 | 222 | 12 | 93.7 | 5,760 |
| April | 3,489 | 222 | 75 | 116 | 6,920 |
| May | 2,914 | 105 | 58 | 70.8 | 4,360 |
| June | 1,182 | 59 | 24 | 39.4 | 2,340 |
| July | 598 | 27 | 13 | 19.3 | 1,190 |
| August | 1,275 | 124 | 16 | 41.1 | 2,530 |
| September | 505 | 26 | 11 | 16.8 | 1,000 |
| Water year 1937-38 | 14,145.9 | 222 | 8.8 | 38.8 | 28,050 |
| **1938-39** | | | | | |
| October | 367.6 | 16 | 8.8 | 11.9 | 729 |
| November | 455 | 20 | 12 | 15.2 | 902 |
| December | 373 | 16 | 9.5 | 12 | 740 |
| January | 354.5 | 13 | 9.5 | 11.4 | 703 |
| February | 282.5 | 12 | 9 | 10.1 | 560 |
| March | 3,255 | 550 | 10 | 105 | 6,460 |
| April | 7,764 | 600 | 105 | 259 | 15,400 |
| May | 1,912 | 102 | 27 | 61.7 | 3,790 |
| June | 1,667 | 98 | 16 | 55.6 | 3,310 |
| July | 828 | 56 | 13 | 26.7 | 1,640 |
| August | 350.6 | 15 | 9 | 11.3 | 695 |
| September | 271.8 | 11 | 7 | 9.06 | 539 |
| Water year 1938-39 | 17,881 | 600 | 7 | 49 | 35,470 |
| **1939-40** | | | | | |
| October | 383.9 | 14 | 8 | 12.4 | 761 |
| November | 516 | 24 | 12 | 17.2 | 1,020 |
| December | 471.5 | 20 | 7.5 | 15.2 | 935 |
| January | 197.5 | 7 | 6 | 6.37 | 392 |
| February | 165.3 | 7 | 4.8 | 5.7 | 328 |
| March | 209.5 | 8.5 | 6 | 6.76 | 416 |
| April | 6,303.5 | 527 | 8.5 | 210 | 12,500 |
| May | 3,763 | 206 | 77 | 121 | 7,460 |
| June | 1,324 | 70 | 25 | 44.1 | 2,630 |
| July | 458 | 23 | 11 | 14.8 | 908 |
| August | 340.7 | 24 | 6 | 11 | 676 |
| September | 259.7 | 15 | 5 | 8.66 | 515 |
| Water year 1939-40 | 14,392.5 | 527 | 4.8 | 39.3 | 28,541 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1940-41** | | | | | |
| October | 336.2 | 19 | 5.8 | 10.8 | 667 |
| November | 474 | 23 | 11 | 15.8 | 940 |
| December | 401 | 14 | 12 | 12.9 | 795 |
| January | 392 | 14 | 12 | 12.6 | 778 |
| February | 352 | 13 | 12 | 12.6 | 698 |
| March | 1,002 | 280 | 11 | 32.3 | 1,990 |
| April | 31,150 | 1,340 | 400 | 1,040 | 61,780 |
| May | 7,143 | 633 | 114 | 230 | 14,170 |
| June | 6,560 | 402 | 106 | 219 | 13,010 |
| July | 3,507 | 180 | 50 | 113 | 6,960 |
| August | 1,495 | 160 | 22 | 48.2 | 2,970 |
| September | 1,589 | 83 | 26 | 53 | 3,150 |
| Water year 1940-41 | 54,401.2 | 1,340 | 5.8 | 149 | 107,900 |
| **1941-42** | | | | | |
| October | 2,285 | 87 | 63 | 73.7 | 4,530 |
| November | 1,962 | 92 | 44 | 65.4 | 3,890 |
| December | 1,590 | 60 | 36 | 51.3 | 3,150 |
| January | 751 | 34 | 13 | 24.2 | 1,490 |
| February | 633 | 30 | 17 | 22.6 | 1,260 |
| March | 1,438 | 95 | 18 | 46.4 | 2,850 |
| April | 19,930 | 1,020 | 100 | 664 | 39,530 |
| May | 12,577 | 937 | 269 | 406 | 24,950 |
| June | 8,948 | 500 | 163 | 298 | 17,750 |
| July | 3,407 | 170 | 72 | 110 | 6,760 |
| August | 2,394 | 191 | 42 | 77.2 | 4,750 |
| September | 3,275 | 240 | 60 | 109 | 6,500 |
| Water year 1941-42 | 59,190 | 1,020 | 13 | 162 | 117,400 |
| **1942-43** | | | | | |
| October | 1,993 | 74 | 54 | 64.3 | 3,950 |
| November | 1,700 | 88 | 38 | 56.7 | 3,370 |
| December | 1,132 | 44 | 34 | 36.5 | 2,250 |
| January | 1,030 | 34 | 32 | 33.2 | 2,040 |
| February | 1,022 | 42 | 32 | 36.5 | 2,030 |
| March | 8,344 | 2,200 | 40 | 269 | 16,500 |
| April | 49,675 | 2,400 | 485 | 1,656 | 98,530 |
| May | 11,504 | 457 | 288 | 371 | 22,820 |
| June | 23,066 | 1,010 | 283 | 769 | 45,750 |
| July | 8,425 | 569 | 176 | 272 | 16,710 |
| August | 4,092 | 366 | 72 | 132 | 8,120 |
| September | 1,888 | 112 | 32 | 62.9 | 3,740 |
| Water year 1942-43 | 113,871 | 2,400 | 32 | 312 | 225,900 |
| **1943-44** | | | | | |
| October | 1,268 | 5.3 | 32 | 40.9 | 2,520 |
| November | 1,779 | 76 | 44 | 59.3 | 3,530 |
| December | 1,301 | 55 | 30 | 42 | 2,580 |
| January | 850 | 30 | 24 | 27.4 | 1,690 |
| February | 922 | 38 | 24 | 31.8 | 1,830 |
| March | 1,208 | 60 | 34 | 39 | 2,400 |
| April | 6,667 | 386 | 65 | 222 | 13,220 |
| May | 8,106 | 776 | 150 | 261 | 16,080 |
| June | 7,522 | 467 | 129 | 251 | 14,920 |
| July | 5,653 | 238 | 88 | 182 | 11,210 |
| August | 5,113 | 338 | 82 | 165 | 10,140 |
| September | 5,563 | 285 | 108 | 185 | 11,030 |
| Water year 1943-44 | 45,952 | 776 | 24 | 126 | 91,150 |

## RED RIVER AT HALSTAD, MINNESOTA

Location: Wire-weight gage, lat. 47°21′, long. 96°51′, on line between sec. 24 and 25, T. 145N., R. 49W on highway bridge half a mile west of Halstad and 2½ miles below mouth of Wild Rice River.

Drainage Area: 21,800 square miles, (includes 3,940 Sq. Mi. in closed Devils Lake basin).

Records Available: March 1936 to June 1937, April 1942 to September 1944 (fragmentary).

Maximum discharge 21,800 second feet April 11, 1943; Minimum observed 5.4 second-feet Oct. 8, 9, 12-14, 1936.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1935-36** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 15-31 | 8,137 | 1,860 | 39 | 479 | 16,140 |
| April | 86,975 | 7,580 | 800 | 2,899 | 172,500 |
| May | 24,882 | 1,460 | 437 | 803 | 49,250 |
| June | 5,825 | 411 | 97 | 194 | 11,550 |
| July | 1,808 | 153 | 16 | 58.3 | 3,590 |
| August | 268.7 | 15 | 5.8 | 8.67 | 533 |
| September | 354 | 32 | 6.6 | 11.8 | 702 |
| Water year 1935-36 | 128,249.7 | ..... | ..... | ..... | 254,365 |
| **1936-37** | | | | | |
| October | 325.5 | 36 | 5.4 | 10.5 | 646 |
| November 1-21 | 475 | 43 | 17 | 226 | 942 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 34,667 | 2,660 | 160 | 1,156 | 68,700 |
| May | 27,359 | 1,920 | 359 | 883 | 54,270 |
| June | 15,496 | 667 | 385 | 517 | 30,740 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1936-37 | 78,222.5 | ..... | ..... | ..... | 155,928 |
| **1941-42** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 13-30 | 25,740 | 1,920 | 1,260 | 1,430 | 51,050 |
| May | 91,660 | 4,950 | 1,860 | 2,957 | 181,800 |
| June | 77,840 | 4,480 | 1,310 | 2,595 | 154,400 |
| July 1-11 | 15,590 | 1,610 | 1,310 | 1,417 | 30,920 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1941-42 | 210,830 | ..... | ..... | ..... | 418,200 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre Feet |
|---|---|---|---|---|---|
| 1942-43 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 5-30 | 308,480 | 21,800 | 2,950 | 11,860 | 611,900 |
| May | 99,510 | 4,220 | 2,830 | 3,210 | 197,400 |
| June | 177,890 | 8,320 | 4,280 | 5,930 | 352,800 |
| July | 97,150 | 6,300 | 1,020 | 3,134 | 192,700 |
| August | 39,670 | 2,560 | 710 | 1,280 | 78,680 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1942-43 | 722,700 | ..... | ..... | ..... | 1,433,000 |
| 1943-44 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 12-30 | 38,610 | 3,200 | 1,260 | 2,032 | 76,580 |
| May | 73,230 | 3,490 | 1,460 | 2,362 | 145,200 |
| June | 102,520 | 6,040 | 1,860 | 3,417 | 203,300 |
| July | 128,210 | 7,200 | 1,610 | 4,136 | 254,300 |
| August | 93,100 | 4,930 | 1,460 | 3,003 | 184,700 |
| September | 78,720 | 4,280 | 1,460 | 2,624 | 156,100 |
| Water year 1943-44 | ..... | ..... | ..... | ..... | 1,020,000 |

## SOUTH FORK OF GOOSE RIVER AT PORTLAND, NO. DAKOTA

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1939-40** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 2,688.7 | 400 | 0 | 89.6 | 5,330 |
| May | 172.7 | 12 | 1.8 | 5.57 | 343 |
| June | 19.6 | 2.1 | 0 | .65 | 39 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1939-40 | 2,881 | 400 | 0 | 7.87 | 5,712 |
| **1940-41** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 1,050.4 | 700 | 0 | 33.9 | 2,080 |
| April | 4,212 | 958 | 11 | 140 | 8,350 |
| May | 305.1 | 24 | 3.2 | 9.84 | 605 |
| June | 817.8 | 72 | 5.7 | 27.3 | 1,620 |
| July | 78.4 | 5.9 | .4 | 2.53 | 156 |
| August | 57 | 10 | .2 | 1.84 | 113 |
| September | 74.4 | 5 | .9 | 2.48 | 148 |
| Water year 1940-41 | 6,595.1 | 958 | 0 | 18.1 | 13,072 |
| **1941-42** | | | | | |
| October | 151.5 | 5.6 | 4 | 4.89 | 300 |
| November | 144.5 | 5.6 | 3.4 | 4.82 | 287 |
| December | 50.3 | 3.4 | .2 | 1.62 | 100 |
| January | 1.1 | .2 | 0 | .04 | 2.2 |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 277.3 | 55 | 0 | 8.95 | 550 |
| April | 2,348 | 420 | 19 | 78.3 | 4,660 |
| May | 1,468 | 140 | 17 | 47.4 | 2,910 |
| June | 421.4 | 28 | 4.2 | 14 | 836 |
| July | 94.5 | 6.6 | 1.2 | 3.05 | 187 |
| August | 47.9 | 4.8 | .6 | 1.55 | 95 |
| September | 24 | 3.3 | .4 | .8 | 48 |
| Water year 1941-42 | 5,028.5 | 420 | 0 | 13.8 | 9,975.2 |

Discontinued.

## GOOSE RIVER NEAR PORTLAND, NORTH DAKOTA

Location: Chain gage lat. 47°33′, long. 97°28′, on line between secs. 12 and 13, T. 147N, R. 54W at highway bridge 6½ miles northwest of Portland.

Drainage Area: 544 square miles.

Records Available: October 1939 to September 1944.

Extremes: Maximum discharge observed 1,130 second-feet April 9, 1941.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1939-40** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 1,479.8 | 436 | 0 | 49.3 | 2,940 |
| May | 19.7 | 2.2 | .2 | .64 | 39 |
| June | .2 | .2 | 0 | .01 | .4 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1939-40 | 1,499.7 | 436 | 0 | 4.10 | 2,979.4 |
| **1940-41** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 11 | 10 | 0 | .35 | 22 |
| April | 7,645.1 | 1,050 | 8.1 | 255 | 15,160 |
| May | 136.7 | 13 | .7 | 4.41 | 271 |
| June | 400.9 | 38 | 3 | 13.4 | 795 |
| July | 48.6 | 3.8 | 0 | 1.57 | 96 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1940-41 | 8,242.3 | 1,050 | 0 | 22.6 | 16,340 |
| **1941-42** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | 8.3 | .5 | 0 | .28 | 16 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 108.7 | 55 | 0 | 3.51 | 216 |
| April | 4,506 | 800 | 24 | 150 | 8,940 |
| May | 869 | 94 | 12 | 28 | 1,720 |
| June | 143.4 | 14 | 1.1 | 4.78 | 284 |
| July | 8.3 | 1.1 | .1 | .27 | 16 |
| August | .4 | .1 | 0 | .01 | .8 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1941-42 | 5,644.1 | 800 | 0 | 15.5 | 11,190 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre Feet |
|---|---|---|---|---|---|
| **1942-43** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 4,722 | 1,100 | 0 | 152 | 9.370 |
| April | 1.716.4 | 282 | 8 | 57.2 | 3,400 |
| May | 309.4 | 16 | 3.9 | 9.98 | 614 |
| June | 920.1 | 99 | 8 | 30.7 | 1,820 |
| July | 80.1 | 8 | .1 | 2.58 | 159 |
| August | .7 | .1 | 0 | .02 | 1.4 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1942-43 | 7,748.7 | 1,100 | 0 | 21.2 | 15,360 |
| **1943-44** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 1,140.7 | 159 | ..... | 38 | 2,260 |
| May | 48.1 | 2.8 | .1 | 1.55 | 95 |
| June | 95.2 | 29 | ..... | 3.17 | 189 |
| July | 28.5 | 2.6 | ..... | .92 | 57 |
| August | 116.1 | 30 | ..... | 3.75 | 230 |
| September | 39 | 8.5 | ..... | 1.30 | 77 |
| Water year 1943-44 | 1,467.6 | 159 | ..... | 4.01 | 2,910 |

## GOOSE RIVER AT HILLSBORO, NORTH DAKOTA

Location: Water stage recorder, lat. 47°24′, long. 97°03′, in NW¼ sec. 5, T. 145 N. R50W, 50 feet upstream from city water supply dam.

Drainage Area: 1,200 square miles.

Records Available: March 1931 to September 1944 (no winter records prior to 1938).

Extremes: Maximum discharge 1,320 second-feet April 11, 1941, no flow at times in 1936, 1938-44.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1930-31 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 214 | 15 | 10 | 14.3 | 424 |
| April | 803.6 | 94 | 4.3 | 26.8 | 1,590 |
| May | 110.5 | 14 | .4 | 3.56 | 219 |
| June | 127.3 | 12 | .2 | 4.24 | 252 |
| July | 39.4 | 9.4 | .2 | 1.27 | 78 |
| August | 41.3 | 2.4 | .2 | 1.33 | 82 |
| September | 9.9 | .7 | .2 | .33 | 20 |
| Water year 1930-31.. | 1,346 | ..... | ..... | ..... | 2,660 |

* 198 Day Record.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1931-32 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 8,439 | 911 | 23 | 272 | 16,740 |
| April | 7,157 | 537 | 49 | 239 | 14,200 |
| May | 849 | 65 | 10 | 27.4 | 1,680 |
| June | 377 | 18 | 3 | 12.6 | 748 |
| July | 30.5 | 3.2 | .3 | .98 | 60 |
| August | 9.1 | .4 | .2 | .29 | 18 |
| September | 11.7 | .8 | .3 | .39 | 23 |
| Water year 1931-32.. | 16,873.3 | ..... | ..... | ..... | 33,470 |

* 214 Day Record.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1932-33 | | | | | |
| October | 16.3 | .8 | .4 | .53 | 32 |
| November | 8.3 | .9 | .8 | .83 | 16 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 1,020 | 140 | 36 | 68 | 2,020 |
| April | 3,172 | 261 | 25 | 106 | 6,290 |
| May | 511 | 26 | 10 | 16.5 | 1,010 |
| June | 180.4 | 14 | .5 | 6.01 | 358 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1932-33.. | 4,900 | ..... | ..... | ..... | 9,726 |

* 147 Day Record.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1933-34** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 11-31 | 350.9 | 41 | 6.9 | 23.4 | 696 |
| April | 993.5 | 65 | 5.6 | 33.1 | 1,970 |
| May | 63.6 | 5.6 | .8 | 2.05 | 126 |
| June | 82.4 | 8.3 | .8 | 2.75 | 163 |
| July | 38.4 | 2 | .8 | 1.24 | 76 |
| August | 45.1 | 1.8 | .9 | 1.45 | 89 |
| September | 83.2 | 3.7 | 1.5 | 2.77 | 165 |
| Water year 1933-34 | 1,657.1 | 65 | .8 | 8.4 | 3,280 |
| Note: 198 Day Record. | | | | | |
| **1934-35** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 17-31 | 1,629 | 201 | 100 | 148 | 3,230 |
| April | 961 | 100 | 11 | 32 | 1,910 |
| May | 617.2 | 90 | 4.2 | 19.9 | 1,220 |
| June | 2,653.3 | 627 | 7 | 88.4 | 5,260 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1934-1935 | 5,860.5 | 627 | 4.2 | 57.4 | 11,620 |
| Note: 102 Day Record. ** Records incomplete from 1931-1935. | | | | | |
| **1935-36** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 15-31 | 25 | 5 | 0 | 1.5 | 50 |
| April | 4,521 | 951 | 0 | 151 | 8,970 |
| May | 436.7 | 36 | 5 | 14.1 | 866 |
| June | 83.1 | 6.2 | .6 | 2.77 | 165 |
| July | 17.9 | 1.8 | .1 | .58 | 36 |
| August | 3.1 | ..... | ..... | .1 | 6.1 |
| September | 3 | ..... | ..... | .1 | 6 |
| Water year 1935-36 | 5,089.8 | 951 | 0 | ..... | 10,100 |
| **1936-37** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 461.1 | 45 | .6 | 15.4 | 915 |
| May | 232.1 | 22 | 1.1 | 7.49 | 460 |
| June | 289.5 | 20 | .1 | 9.65 | 574 |
| July | 75.3 | 13 | .2 | 2.43 | 149 |
| August | 115.7 | 12 | .9 | 3.73 | 229 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1936-37 | 1,173.7 | 45 | .1 | ..... | 2,330 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1937-38** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 13-31 | 1,025 | 104 | 10 | 53.9 | 2,030 |
| April | 195.3 | 10 | 3.7 | 6.51 | 387 |
| May | 165.8 | 8.2 | ..... | 5.35 | 329 |
| June | 40.6 | ..... | ..... | 1.35 | 81 |
| July | .4 | .2 | ..... | .01 | .79 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1937-38 | 1,427.1 | 104 | 0 | ..... | 2,830 |
| **1938-39** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 3,070 | 550 | ..... | 99 | 6,090 |
| April | 1,126.3 | 160 | 4.1 | 37.5 | 2,230 |
| May | 34.8 | 2.6 | .3 | 1.12 | 69 |
| June | 270.5 | 67 | .1 | 9.02 | 537 |
| July | 3.7 | .4 | ..... | .12 | 7.3 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1938-39 | 4,505.3 | 550 | 0 | 12.3 | 8,930 |
| **1939-40** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 4,688.4 | 710 | ..... | 156 | 9,300 |
| May | 280.6 | 27 | 2.1 | 9.05 | 557 |
| June | 49 | 5.3 | ..... | 1.63 | 97 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | 145.4 | 48 | ..... | 4.69 | 288 |
| September | .4 | .4 | ..... | .01 | .8 |
| Water year 1939-40 | 5,163.8 | 710 | ..... | 14.1 | 10,242.8 |
| **1940-41** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 760 | 250 | 0 | 24.5 | 1,510 |
| April | 15,515 | 1,320 | 29 | 517 | 30,770 |
| May | 434.7 | 34 | 3.1 | 14 | 862 |
| June | 1,841 | 152 | 15 | 61.4 | 3,650 |
| July | 214.7 | 15 | 1.4 | 6.93 | 426 |
| August | 39.2 | 5.3 | ..... | 1.26 | 78 |
| September | 75.8 | 8 | ..... | 2.53 | 150 |
| Water year 1940-41 | 18,880.4 | 1,320 | ..... | 51.7 | 37,450 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1941-42** | | | | | |
| October | 187 | 8.2 | 3.9 | 6.06 | 373 |
| November | 157.1 | ..... | ..... | 5.24 | 312 |
| December | 72.3 | ..... | ..... | 2.33 | 143 |
| January | 2.3 | 1.1 | 0 | .07 | 4.6 |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 286.6 | 50 | 0 | 9.25 | 568 |
| April | 7,708 | 1,080 | 58 | 257 | 15,290 |
| May | 2,514 | 225 | 36 | 81.1 | 4,990 |
| June | 942 | 60 | 11 | 31.4 | 1,870 |
| July | 187.5 | 13 | 2.3 | 6.05 | 372 |
| August | 109.9 | 32 | .9 | 3.55 | 218 |
| September | 81.7 | 27 | .4 | 2.72 | 162 |
| Water Year 1941-42 | 12,249.3 | 1,080 | 0 | 33.6 | 24,300 |
| **1942-43** | | | | | |
| October | 28.4 | 2 | .5 | .916 | 56 |
| November | 24.6 | 1.2 | .6 | .820 | 49 |
| December | 23 | 1.2 | .6 | .742 | 46 |
| January | 13.8 | .6 | .3 | .445 | 27 |
| February | 9 | .4 | .2 | .321 | 18 |
| March | 6,664.5 | 1,200 | .2 | 215 | 13,220 |
| April | 3,661 | 550 | 24 | 122 | 7,260 |
| May | 1,033 | 60 | 20 | 33.3 | 2,050 |
| June | 2,743 | 207 | 39 | 91.4 | 5,440 |
| July | 665 | 73 | 1.6 | 21.5 | 1,320 |
| August | 65.7 | 3.2 | 1.7 | 2.12 | 130 |
| September | 13.7 | 2 | .2 | .457 | 27 |
| Water year 1942-43 | 14,944.7 | 1,200 | .2 | 40.9 | 29,640 |
| **1943-44** | | | | | |
| October | 7.2 | .4 | .2 | .23 | 14 |
| November | 12.2 | .5 | .4 | .41 | 24 |
| December | 9.2 | .4 | .2 | .3 | 18 |
| January | 5.4 | .2 | .1 | .17 | 11 |
| February | 3.5 | .2 | 0 | .12 | 6.9 |
| March | 62.7 | 8.3 | .1 | 2.02 | 124 |
| April | 1,964 | 239 | 4 | 65.5 | 3,900 |
| May | 514 | 27 | 11 | 16.6 | 1,020 |
| June | 636.8 | 93 | 9.6 | 21.2 | 1,260 |
| July | 177.3 | 30 | .1 | 5.72 | 352 |
| August | 1,209.2 | 208 | .1 | 39 | 2,400 |
| September | 379.9 | 38 | 3.4 | 12.7 | 754 |
| Water year 1943-44 | 4,981.4 | 239 | 0 | 13.6 | 9,880 |

## RED RIVER AT GRAND FORKS, NORTH DAKOTA

Location: Water-stage recorder, lat. 47°56'26", long. 97°02'47", in SE¼NE¼ sec. 33 T. 152 N., R. 5OW in Grand Forks, 2 miles downstream from Red Lake River.

Drainage Area: 30,100 square miles (includes 3,940 square miles in closed Devils L. basin).

Records Available: May 1901 to September 1944 in reports of the Geological Survey: April 1882 to November 1912 in report of Minn. State Drainage Comm.

Average discharge: 62 years, 2,134 second-feet.

Extremes: 1882-1944: Maximum discharge observed, 43,000 second-feet April 19, 1897 from rating curve extended above 32,000 second-feet; Minimum discharge 2.4 second-feet Feb. 3-5, 12, 14, 16-19, 1937.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1881-82 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 40,800 | ..... | 26,380 | 1,569,600 |
| May | ..... | 26,060 | 10,030 | 13,870 | 852,900 |
| June | ..... | 9,770 | 5,950 | 7,080 | 421,300 |
| July | ..... | 6,990 | 4,530 | 5,660 | 348,000 |
| August | ..... | 4,530 | 2,540 | 3,300 | 196,000 |
| September | ..... | 2,490 | 1,830 | 2,160 | 128,500 |
| Water year 1881-82 | ..... | ..... | ..... | ..... | 3,516,300 |
| 1882-83 | | | | | |
| October | ..... | 2,430 | 1,830 | 2,180 | 134,000 |
| November | ..... | ..... | ..... | 2,290 | 136,000 |
| December | ..... | ..... | ..... | 2,130 | 131,000 |
| January | ..... | ..... | ..... | 1,500 | 9,220 |
| February | ..... | ..... | ..... | 1,630 | 90,500 |
| March | ..... | ..... | ..... | 1,520 | 93,500 |
| April | ..... | 33,400 | ..... | 16,820 | 1,000,800 |
| May | ..... | 28,300 | 6,440 | 14,420 | 886,700 |
| June | ..... | 6,370 | 3,360 | 5,020 | 298,600 |
| July | ..... | 3,300 | 2,030 | 2,660 | 163,600 |
| August | ..... | 2,030 | 1,450 | 1,730 | 106,400 |
| September | ..... | 1,450 | 1,190 | 1,310 | 77,900 |
| Water year 1882-83 | ..... | ..... | ..... | ..... | 3,034,720 |
| 1883-84 | | | | | |
| October | ..... | 1,360 | 1,190 | 1,260 | 77,500 |
| November | ..... | ..... | ..... | 1,270 | 75,600 |
| December | ..... | ..... | ..... | 1,070 | 65,800 |
| January | ..... | ..... | ..... | 815 | 50,100 |
| February | ..... | ..... | ..... | 697 | 40,100 |
| March | ..... | ..... | ..... | 715 | 44,000 |
| April | ..... | 20,600 | ..... | 10,980 | 653,300 |
| May | ..... | 6,370 | 3,530 | 4,760 | 292,700 |
| June | ..... | 5,120 | 2,430 | 3,570 | 212,400 |
| July | ..... | 2,480 | 1,780 | 2,270 | 139,500 |
| August | ..... | 2,540 | 1,190 | 1,520 | 93,500 |
| September | ..... | 2,590 | 2,080 | 2,330 | 138,600 |
| Water year 1883-84 | ..... | ..... | ..... | ..... | 1,883,100 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1884-85** | | | | | |
| October | ..... | 4,790 | 1,980 | 2,990 | 183,900 |
| November | ..... | 2,860 | ..... | 2,600 | 155,000 |
| December | ..... | ..... | ..... | 2,080 | 128,000 |
| January | ..... | ..... | ..... | 1,580 | 93,200 |
| February | ..... | ..... | ..... | 1,270 | 70,500 |
| March | ..... | ..... | ..... | 1,150 | 70,700 |
| April | ..... | 13,040 | ..... | 6,730 | 400,400 |
| May | ..... | 6,160 | 4,110 | 4,310 | 265,600 |
| June | ..... | 5,120 | 3,250 | 4,790 | 285,000 |
| July | ..... | 9,430 | 3,810 | 5,670 | 348,600 |
| August | ..... | 5,880 | 2,700 | 4,950 | 304,400 |
| September | ..... | 3,030 | 1,980 | 2,560 | 152,300 |
| Water year 1884-85 | ..... | ..... | ..... | ..... | 2,457,600 |
| **1885-86** | | | | | |
| October | ..... | 2,180 | 1,630 | 1,850 | 113,800 |
| November | ..... | 1,780 | 1,630 | 1,690 | 100,000 |
| December | ..... | ..... | ..... | 1,270 | 78,100 |
| January | ..... | ..... | ..... | 815 | 50,100 |
| February | ..... | ..... | ..... | 697 | 38,700 |
| March | ..... | ..... | ..... | 560 | 61,500 |
| April | ..... | 10,300 | 4,660 | 6,340 | 377,200 |
| May | ..... | 9,600 | 3,000 | 6,060 | 372,600 |
| June | ..... | 3,120 | 2,000 | 2,610 | 155,300 |
| July | ..... | 2,180 | 900 | 1,550 | 95,300 |
| August | ..... | 890 | 670 | 740 | 45,500 |
| September | ..... | 560 | 520 | 540 | 32,100 |
| Water year 1885-86 | ..... | ..... | ..... | ..... | 1,520,200 |
| **1886-87** | | | | | |
| October | ..... | 730 | 520 | 610 | 37,500 |
| November | ..... | ..... | ..... | 600 | 43,300 |
| December | ..... | ..... | ..... | 587 | 36,100 |
| January | ..... | ..... | ..... | 410 | 25,200 |
| February | ..... | ..... | ..... | 326 | 18,100 |
| March | ..... | ..... | ..... | 342 | 21,000 |
| April | ..... | 7,100 | ..... | 3,010 | 179,100 |
| May | ..... | 2,430 | 1,190 | 1,770 | 108,800 |
| June | ..... | 1,400 | 900 | 1,240 | 73,800 |
| July | ..... | ..... | ..... | 1,200 | 73,800 |
| August | ..... | ..... | ..... | 1,240 | 76,200 |
| September | ..... | 1,000 | 730 | 880 | 52,400 |
| Water year 1886-87 | ..... | ..... | ..... | ..... | 745,300 |
| **1887-88** | | | | | |
| October | ..... | 730 | 610 | 660 | 40,600 |
| November | ..... | 610 | 560 | 590 | 35,100 |
| December | ..... | ..... | ..... | 410 | 25,200 |
| January | ..... | ..... | ..... | 296 | 18,200 |
| February | ..... | ..... | ..... | 242 | 13,900 |
| March | ..... | ..... | ..... | 234 | 14,500 |
| April | ..... | 19,000 | ..... | 9,330 | 555,100 |
| May | ..... | 6,580 | 2,700 | 4,340 | 266,900 |
| June | ..... | 15,100 | 3,030 | 8,530 | 507,500 |
| July | ..... | 6,580 | 2,700 | 4,650 | 285,900 |
| August | ..... | 2,540 | 1,320 | 1,990 | 122,400 |
| September | ..... | 1,110 | 890 | 980 | 58,300 |
| Water year 1887-88 | ..... | ..... | ..... | ..... | 1,943,600 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1888-89** | | | | | |
| October | ..... | 1,000 | 790 | 900 | 55,300 |
| November | ..... | 1,110 | 730 | 960 | 57,100 |
| December | ..... | ..... | ..... | 698 | 42,900 |
| January | ..... | ..... | ..... | 538 | 33,100 |
| February | ..... | ..... | ..... | 515 | 28,600 |
| March | ..... | ..... | ..... | 974 | 59,900 |
| April | ..... | 4,290 | 1,450 | 2,020 | 120,200 |
| May | ..... | 1,540 | 960 | 1,180 | 72,600 |
| June | ..... | 890 | 590 | 710 | 42,200 |
| July | ..... | 700 | 540 | 600 | 36,900 |
| August | ..... | 610 | 410 | 490 | 30,100 |
| September | ..... | 640 | 390 | 490 | 29,200 |
| Water year 1888-89 | ..... | ..... | ..... | ..... | 565,900 |
| **1889-90** | | | | | |
| October | ..... | 590 | 430 | 510 | 31,400 |
| November | ..... | ..... | ..... | 640 | 38,100 |
| December | ..... | ..... | ..... | 470 | 28,900 |
| January | ..... | ..... | ..... | 340 | 20,900 |
| February | ..... | ..... | ..... | 283 | 15,700 |
| March | ..... | ..... | ..... | 289 | 17,800 |
| April | ..... | 3,470 | ..... | 1,830 | 108,900 |
| May | ..... | 1,110 | 860 | 990 | 60,500 |
| June | ..... | 1,500 | 1,030 | 1,300 | 77,400 |
| July | ..... | 1,230 | 760 | 1,040 | 63,900 |
| August | ..... | 730 | 540 | 610 | 37,500 |
| September | ..... | 640 | 490 | 560 | 33,300 |
| Water year 1889-90 | | | | | 534,300 |
| **1890-91** | | | | | |
| October | ..... | 920 | 590 | 700 | 43,000 |
| November | ..... | 960 | 700 | 800 | 47,600 |
| December | ..... | ..... | ..... | 641 | 39,400 |
| January | ..... | ..... | ..... | 493 | 30,300 |
| February | ..... | ..... | ..... | 429 | 23,800 |
| March | ..... | ..... | ..... | 450 | 27,700 |
| April | ..... | 8,360 | ..... | 3,410 | 202,900 |
| May | ..... | 1,980 | 890 | 1,440 | 88,500 |
| June | ..... | 1,630 | 920 | 1,280 | 76,200 |
| July | ..... | 1,450 | 1,070 | 1,330 | 81,800 |
| August | ..... | 1,270 | 790 | 1,160 | 71,300 |
| September | ..... | 860 | 760 | 800 | 47,600 |
| Water year 1890-91 | | | | | 780,100 |
| **1891-92** | | | | | |
| October | ..... | 2,430 | 820 | 1,470 | 90,400 |
| November | ..... | ..... | ..... | 1,190 | 70,800 |
| December | ..... | ..... | ..... | 995 | 61,200 |
| January | ..... | ..... | ..... | 815 | 50,100 |
| February | ..... | ..... | ..... | 758 | 43,600 |
| March | ..... | ..... | ..... | 2,030 | 125,000 |
| April | ..... | 23,000 | 8,200 | 17,400 | 1,035,300 |
| May | ..... | 15,200 | 4,790 | 8,760 | 538,700 |
| June | ..... | 13,300 | 4,530 | 7,280 | 433,200 |
| July | ..... | 6,730 | 1,830 | 3,410 | 209,700 |
| August | ..... | 1,830 | 1,190 | 1,380 | 84,900 |
| September | ..... | 1,270 | 1,070 | 1,180 | 70,200 |
| Water year 1891-92 | | | | | 2,813,100 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1892-93** | | | | | |
| October | ..... | 1,190 | 960 | 1,020 | 62,700 |
| November | ..... | ..... | ..... | 855 | 50,900 |
| December | ..... | ..... | ..... | 665 | 40,900 |
| January | ..... | ..... | ..... | 493 | 30,300 |
| February | ..... | ..... | ..... | 429 | 23,800 |
| March | ..... | ..... | ..... | 441 | 27,100 |
| April | ..... | 37,500 | ..... | 16,000 | 952,000 |
| May | ..... | 32,000 | 4,850 | 15,240 | 937,100 |
| June | ..... | 4,660 | 2,330 | 3,250 | 193,400 |
| July | ..... | 2,330 | 1,630 | 2,110 | 129,700 |
| August | ..... | 1,630 | 960 | 1,120 | 69,900 |
| September | ..... | 1,030 | 760 | 820 | 48,800 |
| Water year 1892-93 | | | | | 2,566,600 |
| **1893-94** | | | | | |
| October | ..... | 960 | 760 | 840 | 51,700 |
| November | ..... | ..... | ..... | 580 | 34,500 |
| December | ..... | ..... | ..... | 587 | 36,100 |
| January | ..... | ..... | ..... | 429 | 26,400 |
| February | ..... | ..... | ..... | 391 | 21,700 |
| March | ..... | ..... | ..... | 441 | 27,100 |
| April | ..... | 16,450 | ..... | 10,000 | 595,000 |
| May | ..... | 9,350 | 4,600 | 5,900 | 362,800 |
| June | ..... | 4,530 | 2,280 | 2,980 | 177,300 |
| July | ..... | 2,330 | 930 | 1,520 | 93,500 |
| August | ..... | 930 | 610 | 760 | 46,700 |
| September | ..... | 610 | 430 | 530 | 31,500 |
| Water year 1893-94 | | | | | 1,504,300 |
| **1894-95** | | | | | |
| October | ..... | 790 | 520 | 730 | 44,900 |
| November | ..... | ..... | ..... | 790 | 47,000 |
| December | ..... | ..... | ..... | 587 | 36,100 |
| January | ..... | ..... | ..... | 429 | 26,400 |
| February | ..... | ..... | ..... | 391 | 21,700 |
| March | ..... | ..... | ..... | 454 | 27,900 |
| April | ..... | ..... | 890 | 1,110 | 66,000 |
| May | ..... | 1,110 | 790 | 920 | 56,600 |
| June | ..... | 2,230 | 760 | 1,460 | 86,900 |
| July | ..... | 1,880 | 1,110 | 1,440 | 88,500 |
| August | ..... | 1,110 | 610 | 760 | 46,700 |
| September | ..... | 610 | 470 | 550 | 32,700 |
| Water year 1894-95 | | | | | 581,400 |
| **1895-96** | | | | | |
| October | ..... | 640 | 470 | 550 | 33,800 |
| November | ..... | ..... | ..... | 891 | 53,000 |
| December | ..... | ..... | ..... | 470 | 28,900 |
| January | ..... | ..... | ..... | 296 | 18,200 |
| February | ..... | ..... | ..... | 410 | 25,600 |
| March | ..... | ..... | ..... | 1,195 | 73,500 |
| April | ..... | 11,400 | ..... | 6,740 | 401,000 |
| May | ..... | 21,600 | 5,390 | 12,400 | 762,500 |
| June | ..... | 20,500 | 5,050 | 12,000 | 714,000 |
| July | ..... | 4,860 | 1,630 | 2,650 | 162,900 |
| August | ..... | 1,730 | 1,070 | 1,410 | 86,700 |
| September | ..... | 1,190 | 990 | 1,110 | 66,000 |
| Water year 1895-96 | | | | | 2,425,700 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1896-97 | | | | | |
| October | ..... | 1,110 | 990 | 1,060 | 65,200 |
| November | ..... | ..... | ..... | 1,230 | 73,200 |
| December | ..... | ..... | ..... | 960 | 59,000 |
| January | ..... | ..... | ..... | 758 | 46,700 |
| February | ..... | ..... | ..... | 697 | 38,700 |
| March | ..... | ..... | ..... | 826 | 50,800 |
| April | ..... | 42,200 | 2,030 | 30,500 | 1,814,800 |
| May | ..... | 21,900 | 3,870 | 8,640 | 531,300 |
| June | ..... | 3,810 | 2,920 | 3,220 | 191,600 |
| July | ..... | 21,600 | 4,170 | 9,080 | 558,300 |
| August | ..... | 16,800 | 3,250 | 6,640 | 408,300 |
| September | ..... | 3,200 | 1,930 | 2,500 | 148,800 |
| Water year 1896-97 | | | | | 3,986,700 |
| 1897-98 | | | | | |
| October | ..... | 2,030 | 1,680 | 1,820 | 111,900 |
| November | ..... | ..... | ..... | 1,580 | 94,000 |
| December | ..... | ..... | ..... | 1,150 | 70,700 |
| January | ..... | ..... | ..... | 910 | 56,000 |
| February | ..... | ..... | ..... | 990 | 55,000 |
| March | ..... | ..... | ..... | 1,330 | 81,800 |
| April | ..... | 6,300 | ..... | 2,570 | 152,900 |
| May | ..... | 2,330 | 1,540 | 1,920 | 118,100 |
| June | ..... | 4,920 | 2,030 | 2,840 | 169,000 |
| July | ..... | 5,880 | 1,830 | 3,440 | 211,500 |
| August | ..... | 1,780 | 1,320 | 1,510 | 92,800 |
| September | ..... | 1,360 | 1,110 | 1,200 | 71,400 |
| Water year 1897-98 | | | | | 1,285,100 |
| 1898-99 | | | | | |
| October | ..... | 1,630 | 1,070 | 1,330 | 81,800 |
| November | ..... | 1,360 | 920 | 1,120 | 66,600 |
| December | ..... | ..... | ..... | 850 | 52,300 |
| January | ..... | ..... | ..... | 696 | 42,800 |
| February | ..... | ..... | ..... | 550 | 30,500 |
| March | ..... | ..... | ..... | 650 | 40,000 |
| April | ..... | 11,100 | ..... | 4,270 | 254,100 |
| May | ..... | 4,290 | 2,760 | 3,540 | 217,700 |
| June | ..... | 5,530 | 3,690 | 4,910 | 292,100 |
| July | ..... | 5,180 | 2,230 | 3,850 | 236,700 |
| August | ..... | 2,230 | 1,780 | 2,010 | 123,600 |
| September | ..... | 1,830 | 1,320 | 1,500 | 89,200 |
| Water year 1898-99 | | | | | 1,527,400 |
| 1899-1900 | | | | | |
| October | ..... | 1,540 | 1,230 | 1,370 | 84,200 |
| November | ..... | 1,500 | 1,000 | 1,260 | 75,000 |
| December | ..... | ..... | ..... | 1,040 | 63,900 |
| January | ..... | ..... | ..... | 740 | 45,500 |
| February | ..... | ..... | ..... | 560 | 31,100 |
| March | ..... | ..... | ..... | 780 | 48,100 |
| April | ..... | 4,290 | 1,150 | 2,020 | 120,200 |
| May | ..... | 1,580 | 730 | 1,060 | 65,200 |
| June | ..... | 920 | 430 | 630 | 37,500 |
| July | ..... | 860 | 410 | 670 | 41,200 |
| August | ..... | 1,270 | 560 | 890 | 54,700 |
| September | ..... | 3,990 | 760 | 2,470 | 147,000 |
| Water year 1899-1900 | | | | | 813,600 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1900-01** | | | | | |
| October | ..... | 7,400 | 3,810 | 5,690 | 349,000 |
| November | ..... | 6,500 | ..... | 4,590 | 273,100 |
| December | ..... | ..... | ..... | 2,290 | 141,100 |
| January | ..... | ..... | ..... | 1,830 | 112,500 |
| February | ..... | ..... | ..... | 1,500 | 83,300 |
| March | ..... | ..... | ..... | 1,620 | 99,600 |
| April | ..... | 15,000 | 730 | 10,700 | 636,600 |
| May | ..... | 8,280 | 2,810 | 4,590 | 282,200 |
| June | ..... | 6,730 | 2,590 | 3,470 | 206,400 |
| July | ..... | 11,600 | 3,690 | 6,810 | 418,700 |
| August | ..... | 3,580 | 1,980 | 2,510 | 154,300 |
| September | ..... | 1,880 | 1,230 | 1,520 | 90,400 |
| Water year 1900-01 | ..... | ..... | ..... | ..... | 2,847,200 |
| **1901-02** | | | | | |
| October | ..... | 2,540 | 1,540 | 2,020 | 124,200 |
| November | ..... | ..... | ..... | 1,640 | 97,600 |
| December | ..... | ..... | ..... | 1,200 | 73,800 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | ..... | ..... | ..... | ..... |
| May | ..... | ..... | ..... | ..... | ..... |
| June | ..... | ..... | ..... | ..... | ..... |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1901-02 | | | | | 295,600 |
| **1902-03** | | | | | |
| October | ..... | 2,655 | 1,320 | 1,637 | 100,655 |
| November | ..... | 3,075 | 1,495 | 2,544 | 151,378 |
| December | ..... | ..... | ..... | ..... | 70,200 |
| January | ..... | ..... | ..... | 1,600 | 98,380 |
| February | ..... | ..... | ..... | 1,420 | 78,863 |
| March | ..... | ..... | ..... | 2,100 | 129,132 |
| April | ..... | 18,767 | 4,455 | 10,626 | 632,291 |
| May | ..... | 7,137 | 4,260 | 5,388 | 331,295 |
| June | ..... | 5,870 | 1,940 | 3,342 | 198,863 |
| July | ..... | 2,105 | 1,067 | 1,443 | 88,727 |
| August | ..... | 1,295 | 870 | 1,050 | 64,562 |
| September | ..... | 2,655 | 1,180 | 1,891 | 112,522 |
| Water year 1902-03 | | | | | 2,119,219 |
| **1903-04** | | | | | |
| October | ..... | 3,935 | 1,395 | 2,982 | 183,356 |
| November | ..... | ..... | ..... | 2,204 | 131,028 |
| December | ..... | ..... | ..... | 1,960 | 120,516 |
| January | ..... | ..... | ..... | ..... | 84,950 |
| February | ..... | ..... | ..... | ..... | 71,100 |
| March | ..... | ..... | ..... | ..... | 91,800 |
| April 15-30 | ..... | 32,920 | 25,520 | 29,200 | 1,115,300 |
| May | ..... | 30,200 | 6,393 | 13,720 | 844,550 |
| June | ..... | 6,750 | 5,053 | 6,020 | 359,000 |
| July | ..... | 6,267 | 2,404 | 3,914 | 240,550 |
| August | ..... | 2,278 | 1,325 | 1,758 | 108,350 |
| September | ..... | 1,876 | 1,460 | 1,613 | 95,950 |
| Water year 1903-04 | | | | | 3,446,450 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1904-05** | | | | | |
| October | ..... | 2,074 | 1,540 | 1,854 | 114,300 |
| November | ..... | 1,920 | 1,550 | 1,704 | 94,550 |
| December | ..... | ..... | ..... | ..... | 74,400 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April (7-30) | ..... | 7,660 | 1,950 | 3,288 | 156,500 |
| May | ..... | 16,700 | 1,900 | 8,138 | 500,400 |
| June | ..... | 5,370 | 4,225 | 4,826 | 287,200 |
| July | ..... | 6,780 | 4,810 | 5,847 | 259,500 |
| August | ..... | 10,860 | 4,745 | 6,564 | 403,600 |
| September | ..... | 5,090 | 3,720 | 4,507 | 268,200 |
| Water year 1904-05 | | | | | 2,158,650 |
| **1905-06** | | | | | |
| October | ..... | 4,095 | 2,900 | 3,345 | 205,700 |
| November (1-27) | ..... | 3,240 | 2,405 | 2,734 | 151,800 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | 1,750 | 108,000 |
| February | ..... | ..... | ..... | 1,590 | 88,300 |
| March | ..... | ..... | ..... | 1,890 | 116,000 |
| April | ..... | 27,600 | 7,000 | 19,800 | 1,180,000 |
| May | ..... | 9,620 | 6,980 | 8,220 | 505,000 |
| June | ..... | 7,880 | 5,200 | 6,060 | 361,000 |
| July | ..... | 6,530 | 3,210 | 4,560 | 280,000 |
| August | ..... | 3,910 | 2,700 | 3,180 | 196,000 |
| September | ..... | 2,920 | 2,180 | 2,470 | 147,000 |
| Water year 1905-06 | | | | | 3,338,800 |
| **1906-07** | | | | | |
| October | ..... | 2,450 | 1,920 | 2,200 | 135,000 |
| November | ..... | ..... | ..... | 2,150 | 128,000 |
| December | ..... | ..... | ..... | 1,630 | 100,000 |
| January | ..... | ..... | ..... | 1,400 | 86,100 |
| February | ..... | ..... | ..... | 1,090 | 60,500 |
| March | ..... | 14,700 | 1,210 | 3,070 | 189,000 |
| April | ..... | 29,400 | 7,320 | 14,800 | 881,000 |
| May | ..... | 6,300 | 3,550 | 4,550 | 280,000 |
| June | ..... | 10,600 | 3,080 | 6,000 | 357,000 |
| July | ..... | 4,630 | 2,310 | 3,290 | 202,000 |
| August | ..... | 2,280 | 1,540 | 2,000 | 123,000 |
| September | ..... | 3,170 | 1,370 | 1,950 | 116,000 |
| Water year 1906-07 | | | | | 2,657,600 |
| **1907-08** | | | | | |
| October | ..... | 2,680 | 1,560 | 1,970 | 121,000 |
| November | ..... | 1,700 | ..... | 1,440 | 85,700 |
| December | ..... | ..... | ..... | 1,200 | 73,800 |
| January | ..... | ..... | ..... | 890 | 54,700 |
| February | ..... | ..... | ..... | 800 | 46,000 |
| March | ..... | ..... | ..... | 1,960 | 121,000 |
| April | ..... | 20,500 | ..... | 9,850 | 586,000 |
| May | ..... | 9,520 | 3,390 | 5,790 | 356,000 |
| June | ..... | 8,680 | 5,360 | 7,140 | 425,000 |
| July | ..... | 5,150 | 2,330 | 3,290 | 202,000 |
| August | ..... | 2,530 | 1,660 | 1,970 | 121,000 |
| September | ..... | 3,550 | 1,330 | 1,760 | 105,000 |
| Water year 1907-08 | | | | | 2,297,200 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1908-09** | | | | | |
| October | ..... | 1,610 | 1,270 | 1,440 | 88,500 |
| November | ..... | 1,390 | ..... | 1,250 | 74,400 |
| December | ..... | ..... | ..... | 830 | 51,000 |
| January | ..... | ..... | ..... | 703 | 43,200 |
| February | ..... | ..... | ..... | 564 | 31,300 |
| March | ..... | ..... | ..... | 925 | 56,900 |
| April | ..... | ..... | ..... | 4,340 | 258,000 |
| May | ..... | 3,690 | 2,780 | 3,090 | 190,000 |
| June | ..... | 5,050 | 2,380 | 3,200 | 185,000 |
| July | ..... | 9,260 | 2,150 | 3,780 | 232,000 |
| August | ..... | 8,040 | 4,320 | 5,590 | 344,000 |
| September | ..... | 4,920 | 2,530 | 3,180 | 191,000 |
| Water year 1908-09 | | | | | 1,745,300 |
| **1909-10** | | | | | |
| October | ..... | 2,480 | 1,970 | 2,230 | 137,000 |
| November | ..... | ..... | ..... | 1,900 | 113,000 |
| December | ..... | ..... | ..... | 2,430 | 149,000 |
| January | ..... | ..... | ..... | 1,520 | 93,500 |
| February | ..... | ..... | ..... | 1,300 | 72,200 |
| March | ..... | 18,500 | ..... | 8,420 | 518,000 |
| April | ..... | 10,800 | 5,020 | 7,840 | 467,000 |
| May | ..... | 8,440 | 2,750 | 4,340 | 267,000 |
| June | ..... | 2,560 | 1,170 | 1,950 | 116,000 |
| July | ..... | 1,140 | 703 | 860 | 52,900 |
| August | ..... | 691 | 373 | 490 | 30,100 |
| September | ..... | 562 | 354 | 426 | 25,300 |
| Water year 1909-10 | | | | | 2,050,000 |
| **1910-11** | | | | | |
| October | ..... | 492 | 343 | 413 | 25,400 |
| November | ..... | 470 | 280 | 395 | 23,500 |
| December | ..... | ..... | ..... | 310 | 19,100 |
| January | ..... | ..... | ..... | 210 | 12,900 |
| February | ..... | ..... | ..... | 185 | 10,300 |
| March | ..... | ..... | ..... | 760 | 46,700 |
| April | ..... | 2,720 | ..... | 1,880 | 112,000 |
| May | ..... | 2,380 | 1,120 | 1,500 | 92,200 |
| June | ..... | 3,500 | 1,050 | 1,760 | 105,000 |
| July | ..... | 1,060 | 318 | 578 | 35,500 |
| August | ..... | 464 | 331 | 392 | 24,100 |
| September | ..... | 454 | 347 | 391 | 23,300 |
| Water year 1910-11 | | | | | 530,000 |
| **1911-12** | | | | | |
| October | ..... | 639 | 271 | 463 | 28,500 |
| November | ..... | ..... | ..... | 370 | 22,000 |
| December | ..... | ..... | ..... | 340 | 20,900 |
| January | ..... | ..... | ..... | 140 | 8,610 |
| February | ..... | ..... | ..... | 110 | 6,330 |
| March | ..... | ..... | ..... | 300 | 18,400 |
| April | ..... | 4,710 | 940 | 2,470 | 147,000 |
| May | ..... | 2,360 | 940 | 1,670 | 103,000 |
| June | ..... | 1,520 | 740 | 1,130 | 67,200 |
| July | ..... | 837 | 592 | 698 | 42,900 |
| August | ..... | 837 | 426 | 559 | 34,400 |
| September | ..... | 2,630 | 385 | 755 | 44,900 |
| Water year 1911-12 | | | | | 544,140 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1912-13** | | | | | |
| October | ..... | 2,520 | 864 | 1,300 | 79,900 |
| November | ..... | 1,150 | ..... | 812 | 48,300 |
| December | ..... | ..... | ..... | 422 | 25,900 |
| January | ..... | ..... | ..... | 318 | 19,700 |
| February | ..... | ..... | ..... | 233 | 13,000 |
| March | ..... | ..... | ..... | 282 | 17,400 |
| April | ..... | ..... | ..... | 7,060 | 422,550 |
| May | ..... | 2,590 | 1,380 | 1,820 | 112,800 |
| June | ..... | 1,590 | 890 | 1,190 | 71,350 |
| July | ..... | 1,720 | 686 | 1,030 | 63,800 |
| August | ..... | 1,110 | 560 | 760 | 47,100 |
| September | ..... | 1,670 | 560 | 1,030 | 71,750 |
| Water year 1912-13 | | | | | 993,550 |
| **1913-14** | | | | | |
| October | ..... | 1,420 | 654 | 1,050 | 65,100 |
| November | ..... | 1,380 | 890 | 1,140 | 68,350 |
| December | ..... | ..... | ..... | 793 | 49,100 |
| January | ..... | ..... | ..... | 509 | 28,500 |
| February | ..... | ..... | ..... | 428 | 26,500 |
| March | ..... | ..... | ..... | 911 | 56,400 |
| April | ..... | ..... | ..... | 2,990 | 179,350 |
| May | ..... | 4,750 | 1,830 | 2,560 | 158,700 |
| June | ..... | 9,200 | 1,780 | 4,820 | 289,150 |
| July | ..... | 6,450 | 1,380 | 2,840 | 176,000 |
| August | ..... | 1,300 | 862 | 1,090 | 67,550 |
| September | ..... | 1,630 | 890 | 1,180 | 70,750 |
| Water year 1913-14 | | 9,200 | | | 1,235,450 |
| **1914-15** | | | | | |
| October | ..... | 1,460 | 1,030 | 1,270 | 77,800 |
| November | ..... | 1,500 | ..... | 1,350 | 80,300 |
| December | ..... | ..... | ..... | 1,170 | 71,700 |
| January | ..... | ..... | ..... | 780 | 48,000 |
| February | ..... | ..... | ..... | 740 | 41,100 |
| March | ..... | ..... | ..... | 1,170 | 71,800 |
| April | ..... | 9,950 | 2,000 | 4,150 | 247,000 |
| May | ..... | 4,740 | 2,050 | 3,220 | 198,000 |
| June | ..... | 18,600 | 2,100 | 5,750 | 342,000 |
| July | ..... | 21,500 | 3,880 | 11,000 | 679,000 |
| August | ..... | 3,750 | 1,760 | 2,410 | 148,000 |
| September | ..... | 1,720 | 1,460 | 1,550 | 92,200 |
| Water year 1914-15 | | 21,500 | 1,030 | 2,900 | 2,096,900 |
| **1915-16** | | | | | |
| October | ..... | 1,760 | 1,500 | 1,610 | 99,000 |
| November | ..... | 1,540 | ..... | 1,410 | 83,900 |
| December | ..... | ..... | ..... | 1,240 | 76,200 |
| January | ..... | ..... | ..... | 840 | 51,600 |
| February | ..... | ..... | ..... | 670 | 38,500 |
| March | ..... | ..... | ..... | 1,070 | 65,800 |
| April | ..... | 29,000 | 6,340 | 22,200 | 1,320,000 |
| May | ..... | 23,400 | 5,980 | 11,000 | 676,000 |
| June | ..... | 8,990 | 4,870 | 6,820 | 406,000 |
| July | ..... | 14,700 | 6,770 | 11,300 | 695,000 |
| August | ..... | 6,410 | 4,070 | 4,920 | 303,000 |
| September | ..... | 5,010 | 3,180 | 3,960 | 236,000 |
| Water year 1915-16 | | 29,000 | | 5,580 | 4,051,000 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1916-17** | | | | | |
| October | ..... | 3,480 | 2,720 | 3,050 | 188,000 |
| November | ..... | 3,060 | 2,390 | 2,770 | 165,000 |
| December | ..... | 2,440 | 1,300 | 1,780 | 109,000 |
| January | ..... | 1,390 | 1,050 | 1,220 | 75,000 |
| February | ..... | 1,050 | 824 | 929 | 51,600 |
| March | ..... | 8,760 | 920 | 1,760 | 108,000 |
| April | ..... | 20,200 | 6,700 | 11,700 | 696,000 |
| May | ..... | 6,780 | 2,830 | 4,780 | 294,000 |
| June | ..... | 2,780 | 1,620 | 2,190 | 130,000 |
| July | ..... | 1,520 | 824 | 1,180 | 72,600 |
| August | ..... | 824 | 473 | 597 | 36,700 |
| September | ..... | 897 | 395 | 562 | 33,300 |
| Water year 1916-17 | | 20,200 | 395 | 2,710 | 1,959,200 |
| **1917-18** | | | | | |
| October | ..... | 720 | 501 | 588 | 36,200 |
| November | ..... | 972 | 622 | 797 | 47,400 |
| December | ..... | 654 | 305 | 447 | 27,500 |
| January | ..... | 326 | 204 | 266 | 16,400 |
| February | ..... | 248 | 186 | 200 | 11,100 |
| March | ..... | 4,480 | 272 | 1,490 | 91,600 |
| April | ..... | 3,520 | 1,160 | 1,811 | 108,000 |
| May | ..... | 2,860 | 1,440 | 1,850 | 114,000 |
| June | ..... | 2,800 | 1,200 | 1,970 | 117,000 |
| July | ..... | 1,160 | 655 | 843 | 51,800 |
| August | ..... | 1,120 | 622 | 723 | 44,500 |
| September | ..... | 950 | 440 | 568 | 33,800 |
| Water year 1917-18 | | 4,480 | 186 | 965 | 699,300 |
| **1918-19** | | | | | |
| October | ..... | 527 | 320 | 407 | 25,000 |
| November | ..... | 833 | 558 | 653 | 38,900 |
| December | ..... | 760 | 622 | 673 | 41,400 |
| January | ..... | 622 | 341 | 399 | 24,500 |
| February | ..... | 440 | 263 | 344 | 19,100 |
| March | ..... | 5,350 | 263 | 1,100 | 67,600 |
| April | ..... | 7,980 | 3,700 | 5,280 | 314,000 |
| May | ..... | 4,000 | 1,800 | 3,220 | 198,000 |
| June | ..... | 2,140 | 1,390 | 1,750 | 104,000 |
| July | ..... | 13,400 | 2,380 | 6,660 | 410,000 |
| August | ..... | 4,780 | 1,970 | 3,160 | 194,000 |
| September | ..... | 1,910 | 1,250 | 1,420 | 84,500 |
| Water year 1918-19 | ..... | 13,400 | 263 | 2,100 | 1,521,000 |
| **1919-20** | | | | | |
| October | ..... | 1,300 | 1,070 | 1,170 | 71,900 |
| November | ..... | 1,340 | 870 | 1,110 | 66,000 |
| December | ..... | 871 | 689 | 779 | 47,900 |
| January | ..... | ..... | ..... | 690 | 42,400 |
| February | ..... | ..... | ..... | 670 | 38,500 |
| March | ..... | 30,300 | 655 | 7,050 | 433,000 |
| April | ..... | 29,800 | 4,840 | 11,400 | 678,000 |
| May | ..... | 4,720 | 3,280 | 3,710 | 228,000 |
| June | ..... | 7,030 | 3,460 | 4,630 | 276,000 |
| July | ..... | 4,540 | 2,200 | 3,310 | 204,000 |
| August | ..... | 2,140 | 1,070 | 1,430 | 87,900 |
| September | ..... | 1,340 | 833 | 1,040 | 61,900 |
| Water year 1919-20 | ..... | 30,300 | ..... | 3,080 | 2,235,500 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1920-21** | | | | | |
| October | ..... | 1,340 | 1,030 | 1,180 | 72,600 |
| November | ..... | 1,160 | 990 | 1,070 | 63,700 |
| December | ..... | 1,160 | 950 | 1,030 | 63,300 |
| January | ..... | ..... | ..... | 800 | 49,200 |
| February | ..... | ..... | ..... | 730 | 40,500 |
| March | ..... | 4,180 | 689 | 1,550 | 95,300 |
| April | ..... | 11,500 | 2,500 | 4,860 | 289,000 |
| May | ..... | 2,800 | 1,340 | 1,870 | 115,000 |
| June | ..... | 3,400 | 1,690 | 2,720 | 162,000 |
| July | ..... | 2,140 | 833 | 1,380 | 84,800 |
| August | ..... | 1,300 | 230 | 603 | 37,100 |
| September | ..... | 1,970 | 1,030 | 1,470 | 87,500 |
| Water year 1920-21 | ..... | 11,500 | 230 | 1,600 | 1,160,000 |
| **1921-22** | | | | | |
| October | ..... | 1,390 | 497 | 787 | 48,400 |
| November | ..... | 760 | 468 | 607 | 36,100 |
| December | ..... | 724 | 558 | 655 | 40,300 |
| January | ..... | 542 | 263 | 385 | 23,700 |
| February | ..... | 542 | 320 | 418 | 23,200 |
| March | ..... | 8,680 | 558 | 3,140 | 193,000 |
| April | ..... | 16,600 | 4,060 | 9,610 | 572,000 |
| May | ..... | 11,700 | 2,140 | 5,250 | 323,000 |
| June | ..... | 3,820 | 1,800 | 2,780 | 165,000 |
| July | ..... | 1,690 | 689 | 1,150 | 70,700 |
| August | ..... | 655 | 413 | 508 | 31,200 |
| September | ..... | 724 | 440 | 513 | 30,500 |
| Water year 1921-22 | ..... | 16,600 | 263 | 2,150 | 1,557,100 |
| **1922-23** | | | | | |
| October | ..... | 590 | 450 | 507 | 31,200 |
| November | ..... | 847 | 590 | 720 | 42,800 |
| December | ..... | 712 | 375 | 505 | 31,100 |
| January | ..... | 477 | 330 | 404 | 24,800 |
| February | ..... | 367 | 267 | 304 | 16,900 |
| March | ..... | 590 | 267 | 404 | 24,800 |
| April | ..... | 15,900 | 590 | 5,450 | 324,000 |
| May | ..... | 5,780 | 1,980 | 3,190 | 196,000 |
| June | ..... | 4,160 | 920 | 1,570 | 93,400 |
| July | ..... | 5,000 | 745 | 1,880 | 116,000 |
| August | ..... | 883 | 424 | 588 | 36,200 |
| September | ..... | 533 | 424 | 473 | 28,100 |
| Water year 1922-23 | ..... | 15,900 | 267 | 1,330 | 965,300 |
| **1923-24** | | | | | |
| October | ..... | 533 | 450 | 478 | 29,400 |
| November | ..... | 619 | 424 | 501 | 29,800 |
| December | ..... | 615 | 300 | 434 | 26,700 |
| January | ..... | 322 | 174 | 236 | 14,500 |
| February | ..... | 286 | 189 | 213 | 12,300 |
| March | ..... | 1,310 | 300 | 546 | 33,600 |
| April | ..... | 2,200 | 1,400 | 1,780 | 106,000 |
| May | ..... | 2,530 | 1,400 | 2,010 | 124,000 |
| June | ..... | 1,350 | 853 | 1,050 | 62,500 |
| July | ..... | 1,180 | 443 | 750 | 46,100 |
| August | ..... | 498 | 345 | 423 | 26,000 |
| September | ..... | 470 | 189 | 336 | 2 0,000 |
| Water year | ..... | 2,530 | 174 | 731 | 530,900 |
| Water year 1923-24 | ..... | 2,530 | 174 | 731 | 530,900 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1924-25** | | | | | |
| October | ..... | 678 | 443 | 553 | 34,000 |
| November | ..... | ..... | ..... | 411 | 24,500 |
| December | ..... | ..... | ..... | 206 | 12,700 |
| January | ..... | ..... | ..... | 130 | 7,780 |
| February | ..... | ..... | ..... | 140 | 68,200 |
| March | ..... | 6,290 | ..... | 1,110 | 131,000 |
| April | ..... | 6,770 | 646 | 2,220 | 86,700 |
| May | ..... | 1,930 | 1,010 | 1,410 | 343,000 |
| June | ..... | 9,690 | 1,310 | 5,770 | 133,000 |
| July | ..... | 4,790 | 498 | 2,170 | 29,900 |
| August | ..... | ..... | ..... | 388 | 23,900 |
| September | ..... | ..... | ..... | 503 | 7,780 |
| Water year 1924-25 | ..... | 9,690 | ..... | 1,250 | 902,460 |
| **1925-26** | | | | | |
| October | ..... | ..... | 711 | 845 | 52,000 |
| November | ..... | 853 | 585 | 702 | 41,800 |
| December | ..... | 646 | 585 | 623 | 38,300 |
| January | ..... | ..... | ..... | 480 | 29,500 |
| February | ..... | ..... | ..... | 480 | 26,700 |
| March | ..... | 7,720 | ..... | 2,430 | 149,000 |
| April | ..... | 6,910 | 1,440 | 3,870 | 230,000 |
| May | ..... | 1,400 | ..... | 1,090 | 67,000 |
| June | ..... | ..... | ..... | 1,900 | 113,000 |
| July | ..... | ..... | ..... | 1,300 | 79,900 |
| August | ..... | ..... | ..... | 460 | 28,300 |
| September | ..... | ..... | ..... | 420 | 25,000 |
| Water year 1925-26 | ..... | 7,720 | ..... | 1,220 | 880,500 |
| **1926-27** | | | | | |
| October | ..... | 891 | 745 | 830 | 51,000 |
| November | ..... | 1,090 | 498 | 750 | 44,600 |
| December | ..... | 555 | 345 | 444 | 27,300 |
| January | ..... | ..... | ..... | 336 | 20,600 |
| February | ..... | ..... | ..... | 306 | 17,000 |
| March | ..... | 7,790 | ..... | 3,560 | 219,000 |
| April | ..... | 10,600 | 4,790 | 8,160 | 486,000 |
| May | ..... | 9,440 | 4,730 | 7,540 | 464,000 |
| June | ..... | 7,340 | 3,150 | 4,560 | 271,000 |
| July | ..... | 2,980 | 1,490 | 2,220 | 136,000 |
| August | ..... | 1,400 | 1,180 | 1,240 | 76,200 |
| September | ..... | ..... | ..... | 1,210 | 72,000 |
| Water year 1926-27 | ..... | 10,600 | ..... | 2,600 | 1,884,700 |
| **1927-28** | | | | | |
| October | ..... | ..... | ..... | 1,110 | 68,200 |
| November | ..... | 1,010 | 853 | 960 | 57,100 |
| December | ..... | ..... | ..... | 730 | 44,900 |
| January | ..... | ..... | ..... | 580 | 35,700 |
| February | ..... | ..... | ..... | 600 | 34,500 |
| March | ..... | 11,300 | 615 | 2,490 | 153,000 |
| April | ..... | 12,200 | 2,420 | 4,870 | 290,000 |
| May | ..... | 2,980 | 1,400 | 2,230 | 137,000 |
| June | ..... | 4,140 | 1,400 | 2,330 | 139,000 |
| July | ..... | 2,980 | 1,440 | 2,130 | 131,000 |
| August | ..... | 2,250 | 1,010 | 1,310 | 80,600 |
| September | ..... | 3,440 | 1,400 | 2,230 | 133,000 |
| Water year 1927-28 | ..... | 12,200 | ..... | 1,790 | 1,304,000 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1928-29** | | | | | |
| October | ..... | 1,780 | 1,310 | 1,430 | 87,900 |
| November | ..... | 1,880 | 845 | 1,260 | 75,000 |
| December | ..... | 966 | 845 | 943 | 58,000 |
| January | ..... | 966 | 707 | 869 | 53,400 |
| February | ..... | 695 | 561 | 637 | 35,400 |
| March | ..... | 17,100 | 695 | 6,870 | 422,000 |
| April | ..... | 6,700 | 2,420 | 3,730 | 222,000 |
| May | ..... | 2,420 | 1,830 | 2,090 | 129,000 |
| June | ..... | 1,880 | 925 | 1,320 | 78,600 |
| July | ..... | 1,220 | 549 | 783 | 48,100 |
| August | ..... | 497 | 313 | 390 | 24,000 |
| September | ..... | 320 | 268 | 293 | 17,400 |
| Water year 1928-29 | ..... | 17,100 | 268 | 1,730 | 1,250,800 |
| **1929-30** | | | | | |
| October | ..... | 593 | 321 | 398 | 24,500 |
| November | ..... | 416 | 365 | 395 | 23,500 |
| December | ..... | 385 | 255 | 309 | 19,000 |
| January | ..... | 255 | 143 | 194 | 11,900 |
| February | ..... | 660 | 131 | 294 | 16,300 |
| March | ..... | 6,770 | 731 | 3,940 | 242,000 |
| April | ..... | 9,610 | 1,400 | 3,920 | 233,000 |
| May | ..... | 6,430 | 1,580 | 3,110 | 191,000 |
| June | ..... | 2,090 | 845 | 1,150 | 68,400 |
| July | ..... | 806 | 296 | 591 | 36,300 |
| August | ..... | 296 | 143 | 202 | 12,400 |
| September | ..... | 170 | 131 | 151 | 8,980 |
| Water year 1929-30 | ..... | 9,610 | 131 | 1,230 | 887,280 |
| **1930-31** | | | | | |
| October | ..... | 240 | 131 | 197 | 12,100 |
| November | ..... | 365 | 170 | 251 | 14,900 |
| December | ..... | 275 | 178 | 194 | 11,900 |
| January | ..... | 178 | 156 | 161 | 9,900 |
| February | ..... | 471 | 200 | 273 | 15,200 |
| March | ..... | 885 | 341 | 477 | 29,300 |
| April | ..... | 1,580 | 796 | 1,090 | 64,900 |
| May | ..... | 796 | 534 | 612 | 37,600 |
| June | ..... | 830 | 228 | 492 | 29,300 |
| July | ..... | 504 | 136 | 277 | 17,000 |
| August | ..... | 170 | 110 | 136 | 8,360 |
| September | ..... | 113 | 20 | 59.5 | 3,540 |
| Water year 1930-31 | ..... | 1,580 | 20 | 351 | 254,000 |
| **1931-32** | | | | | |
| October | ..... | 208 | 39 | 111 | 6,820 |
| November | ..... | 249 | 152 | 199 | 11,800 |
| December | ..... | 179 | 101 | 133 | 8,180 |
| January | ..... | 208 | 136 | 160 | 9,840 |
| February | ..... | 1,090 | 67 | 207 | 11,900 |
| March | ..... | 2,810 | 534 | 1,170 | 71,900 |
| April | ..... | 10,200 | 1,180 | 3,930 | 234,000 |
| May | ..... | 1,260 | 559 | 919 | 56,500 |
| June | ..... | 529 | 278 | 401 | 23,900 |
| July | ..... | 361 | 81 | 178 | 10,900 |
| August | ..... | 78 | 50 | 58.6 | 3,600 |
| September | ..... | 56 | 26 | 43.4 | 2,580 |
| Water year 1931-32 | ..... | 10,200 | 26 | 623 | 451,920 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1932-33** | | | | | |
| October | ..... | 100 | 13 | 36.0 | 2,210 |
| November | ..... | 114 | 64 | 82.7 | 4,920 |
| December | ..... | 81 | 33 | 57.4 | 3,530 |
| January | ..... | 48 | 31 | 38.6 | 2,370 |
| February | ..... | 76 | ..... | 33.6 | 1,870 |
| March | ..... | 1,780 | 77 | 927 | 57,000 |
| April | ..... | 4,380 | 789 | 2,250 | 134,000 |
| May | ..... | 1,050 | 529 | 768 | 47,200 |
| June | ..... | 754 | 128 | 428 | 25,500 |
| July | ..... | 175 | 68 | 116 | 7,130 |
| August | ..... | 76 | 19 | 41.5 | 2,550 |
| September | ..... | 44 | 21 | 31.3 | 1,860 |
| Water year 1932-33 | ..... | 4,380 | 13 | 401 | 290,140 |
| **1933-34** | | | | | |
| October | ..... | 60 | 21 | 31.7 | 1,950 |
| November | ..... | 135 | 50 | 79.0 | 4,700 |
| December | ..... | 61 | 42 | 52.5 | 3,230 |
| January | ..... | 56 | 18 | 39.0 | 2,400 |
| February | ..... | 64 | 24 | 40.7 | 2,260 |
| March | ..... | 720 | 80 | 419 | 25,780 |
| April | ..... | 3,150 | 590 | 1,540 | 91,650 |
| May | ..... | 622 | 142 | 373 | 22.950 |
| June | ..... | 234 | 78 | 151 | 8,980 |
| July | ..... | 336 | 39 | 153 | 9,420 |
| August | ..... | 37 | 24 | 30.6 | 1,880 |
| September | ..... | 28 | 16 | 20.7 | 1,230 |
| Water year 1933-34 | ..... | 3,150 | 16 | 244 | 176,430 |
| **1934-35** | | | | | |
| October | 1,259 | 80 | 16 | 40.6 | 2,500 |
| November | 2,190 | 102 | 60 | 73.0 | 4,340 |
| December | 1,262 | 81 | 27 | 40.7 | 2,500 |
| January | 858 | 34 | 24 | 27.7 | 1,700 |
| February | 891 | 51 | 22 | 31.8 | 1,770 |
| March | 27,840 | 2,750 | 52 | 898 | 55,220 |
| April | 45,624 | 2,300 | 974 | 1,521 | 90,490 |
| May | 26,538 | 1,050 | 428 | 856 | 52,640 |
| June | 15,092 | 860 | 300 | 503 | 29,930 |
| July | 20,651 | 878 | 456 | 666 | 40,960 |
| August | 12,537 | 590 | 223 | 404 | 24,870 |
| September | 5,513 | 312 | 100 | 184 | 10,930 |
| Water year 1934-35 | 160,255 | 2,750 | 16 | 439 | 317,850 |
| **1935-36** | | | | | |
| October | 3,195 | 122 | 86 | 103 | 6,340 |
| November | 2,494 | 100 | 74 | 83.3 | 4,950 |
| December | 2,188 | 80 | 64 | 70.6 | 4,340 |
| January | 1,817 | 66 | 50 | 58.6 | 3,600 |
| February | 1,576 | 62 | 50 | 54.3 | 3,130 |
| March | 1,975 | 76 | 52 | 63.7 | 3,920 |
| April | 144,871 | 14,500 | 336 | 4,829 | 287,300 |
| May | 45,953 | 2,960 | 654 | 1,482 | 91,150 |
| June | 8,230 | 606 | 142 | 274 | 16,320 |
| July | 2,753 | 148 | 44 | 88.8 | 5,460 |
| August | 995 | 46 | 26 | 32.1 | 1,970 |
| September | 610 | 34 | 13 | 20.3 | 1,210 |
| Water year 1935-36 | 216,661 | 14,500 | 13 | 592 | 429,690 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1936-37** | | | | | |
| October | 375 | 13 | 10 | 12.1 | 744 |
| November | 914 | 91 | 12 | 30.5 | 1,810 |
| December | 551.4 | 52 | 3.6 | 17.8 | 1,090 |
| January | 582.6 | 36 | 2.6 | 18.8 | 1,160 |
| February | 80.4 | 4.0 | 2.4 | 2.87 | 159 |
| March | 1,304.8 | 121 | 4.0 | 42.1 | 2,590 |
| April | 44,549 | 3,700 | 155 | 1,485 | 88,360 |
| May | 50,727 | 4,120 | 670 | 1,636 | 100,600 |
| June | 27,659 | 1,570 | 374 | 922 | 54,860 |
| July | 23,776 | 1,810 | 223 | 767 | 46,160 |
| August | 41,323 | 2,660 | 704 | 1,333 | 81,960 |
| September | 23,813 | 1,010 | 456 | 794 | 47,230 |
| Water year 1936-37 | 215,655.2 | 4,120 | 2.4 | 591 | 426,723 |
| **1937-38** | | | | | |
| October | 9,802 | 404 | 166 | 316 | 19,440 |
| November | 6,406 | 336 | 94 | 214 | 12,710 |
| December | 1,732 | 95 | 30 | 55.9 | 3,440 |
| January | 1,901 | 91 | 36 | 61.3 | 3,770 |
| February | 2,505 | 113 | 63 | 89.5 | 4,970 |
| March | 40,573 | 4,360 | 106 | 1,309 | 80,480 |
| April | 28,623 | 1,880 | 659 | 954 | 56,770 |
| May | 141,360 | 6,630 | 1,040 | 4,560 | 280,400 |
| June | 59,757 | 3,170 | 927 | 1,990 | 118,500 |
| July | 21,616 | 1,150 | 197 | 697 | 42,880 |
| August | 5,881 | 271 | 127 | 190 | 11,660 |
| September | 6,246 | 392 | 152 | 208 | 12,390 |
| Water year 1937-38 | 326,402 | 6,630 | 30 | 894 | 647,410 |
| **1938-39** | | | | | |
| October | 6,696 | 315 | 147 | 216 | 13,280 |
| November | 5,705 | 268 | 140 | 190 | 11,320 |
| December | 6,180 | 220 | 150 | 199 | 12,260 |
| January | 7,350 | 280 | 180 | 237 | 14,580 |
| February | 6,400 | 260 | 170 | 229 | 12,690 |
| March | 14,090 | 3,000 | 180 | 455 | 27,950 |
| April | 93,790 | 6,500 | 1,560 | 3,126 | 186,000 |
| May | 28,260 | 1,600 | 566 | 912 | 56,050 |
| June | 20,597 | 1,100 | 450 | 687 | 40,850 |
| July | 12,016 | 739 | 155 | 388 | 23,830 |
| August | 3,664 | 208 | 68 | 118 | 7,270 |
| September | 6,762 | 332 | 115 | 225 | 13,410 |
| Water year 1938-39 | 211,510 | 6,500 | 68 | 579 | 419,500 |
| **1939-40** | | | | | |
| October | 10,031 | 433 | 276 | 324 | 19,900 |
| November | 10,065 | 433 | 208 | 336 | 19,960 |
| December | 8,752 | 433 | 170 | 282 | 17,360 |
| January | 5,000 | 200 | 120 | 161 | 9,920 |
| February | 4,930 | 220 | 140 | 170 | 9,780 |
| March | 7,100 | 340 | 190 | 229 | 14,080 |
| April | 122,640 | 10,000 | 320 | 4,088 | 243,300 |
| May | 60,590 | 2,430 | 1,430 | 1,955 | 120,200 |
| June | 28,825 | 1,390 | 569 | 961 | 57,170 |
| July | 9,197 | 553 | 120 | 297 | 18,240 |
| August | 6,575 | 350 | 130 | 212 | 13,040 |
| September | 5,121 | 260 | 108 | 171 | 10,160 |
| Water year 1939-40 | 278,826 | 10,000 | 108 | 762 | 553,110 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1940-41** | | | | | |
| October | 7,603 | 355 | 179 | 245 | 15,080 |
| November | 10,333 | 537 | 220 | 344 | 20,500 |
| December | 8,740 | 320 | 240 | 282 | 17,340 |
| January | 10,360 | 360 | 280 | 334 | 20,550 |
| February | 10,020 | 400 | 320 | 358 | 19,870 |
| March | 13,890 | 950 | 340 | 448 | 27,550 |
| April | 210,380 | 13,400 | 1,390 | 7,013 | 417,300 |
| May | 67,150 | 4,120 | 1,020 | 2,166 | 133,200 |
| June | 141,112 | 8,500 | 920 | 4,704 | 279,900 |
| July | 30,575 | 1,640 | 432 | 986 | 60,640 |
| August | 23,435 | 1,340 | 292 | 756 | 46,480 |
| September | 48,050 | 3,110 | 738 | 1,602 | 95,310 |
| Water year 1940-41 | 581,648 | 13,400 | 179 | 1,594 | 1,154,000 |
| **1941-42** | | | | | |
| October | 53,480 | 2,660 | 1,230 | 1,725 | 106,100 |
| November | 33,100 | 1,340 | 750 | 1,104 | 65,710 |
| December | 27,270 | 1,200 | 700 | 880 | 54,090 |
| January | 16,910 | 650 | 480 | 545 | 33,540 |
| February | 16,050 | 600 | 500 | 573 | 31,830 |
| March | 50,300 | 7,000 | 550 | 1,623 | 99,770 |
| April | 106,300 | 11,000 | 3,090 | 5,343 | 318,000 |
| May | 207,540 | 12,600 | 3,560 | 6,695 | 411,600 |
| June | 107,960 | 5,470 | 1,940 | 3,599 | 214,100 |
| July | 51,140 | 2,020 | 1,400 | 1,650 | 101,400 |
| August | 32,002 | 1,770 | 1,814 | 1,032 | 63,480 |
| September | 91,860 | 4,720 | 2,110 | 3,062 | 182,200 |
| Water year 1941-42 | 847,942 | 12,600 | 480 | 2,323 | 1,682,000 |
| **1942-43** | | | | | |
| October | 47,300 | 2,020 | 1,100 | 1,526 | 93,820 |
| November | 31,850 | 1,300 | 750 | 1,062 | 63,170 |
| December | 22,750 | 850 | 650 | 734 | 45,120 |
| January | 23,950 | 900 | 700 | 773 | 47,500 |
| February | 19,050 | 800 | 550 | 680 | 37,790 |
| March | 33,100 | 7,600 | 500 | 1,068 | 65,650 |
| April | 549,400 | 28,100 | 6,300 | 18,310 | 1,090,000 |
| May | 178,570 | 7,140 | 4,960 | 5,760 | 354,200 |
| June | 311,560 | 14,100 | 7,140 | 10,390 | 618,000 |
| July | 154,120 | 8,370 | 2,230 | 4,972 | 305,700 |
| August | 70,750 | 3,940 | 1,690 | 2,282 | 140,300 |
| September | 48,470 | 1,900 | 1,400 | 1,616 | 96,140 |
| Water year 1942-43 | 1,490,870 | 28,100 | 500 | 4,085 | 2,957,000 |
| **1943-44** | | | | | |
| October | 41,560 | 1,460 | 1,220 | 1,341 | 82,430 |
| November | 35,160 | 1,420 | 800 | 1,172 | 69,740 |
| December | 28,550 | 1,000 | 800 | 921 | 56,630 |
| January | 21,600 | 800 | 650 | 697 | 42,840 |
| February | 18,900 | 700 | 600 | 652 | 37,490 |
| March | 19,650 | 850 | 600 | 634 | 38,980 |
| April | 99,320 | 7,000 | 1,000 | 3,311 | 197,000 |
| May | 103,870 | 4,460 | 2,420 | 3,351 | 206,000 |
| June | 162,760 | 8,630 | 2,970 | 5,425 | 322,800 |
| July | 182,860 | 9,670 | 2,470 | 5,899 | 362,700 |
| August | 155,920 | 10,300 | 2,140 | 5,030 | 309,300 |
| September | 125,020 | 6,460 | 2,670 | 4,167 | 248,000 |
| Water year 1943-44 | 995,170 | 10,300 | 600 | 2,719 | 1,974,000 |

## RED RIVER AT OSLO, MINNESOTA

Location: Staff gage, lat. 48°11′, long. 97°09′, in sec. 31, T. 155N., R. 50W, at Minneapolis, St. Paul, and Sault Ste. Marie Ry. bridge in Oslo.

Records Available: April 1936 to September 1936, April 1941 to September 1944 (fragmentary).

Extremes: Maximum daily discharge 27,300 second feet Apr. 13, 1943.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1935-36** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 153,325 | 14,500 | 75 | 5,111 | 304,100 |
| May | 50,640 | 3,370 | 720 | 1,634 | 100,400 |
| June | 8,592 | 640 | 140 | 286 | 17,040 |
| July | 2,879 | 167 | 37 | 92.9 | 5,710 |
| August | 967 | 44 | 26 | 31.2 | 1,920 |
| September | 567 | 30 | 14 | 18.9 | 1,120 |
| Water year 1935-36 | 216,970 | ..... | ..... | ..... | 430,300 |
| **1936-37** | | | | | |
| October | 428 | 18 | 10 | 13.8 | 849 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 44,627 | 3,770 | 80 | 1,488 | 88,560 |
| May | 53,165 | 4,070 | 665 | 1,715 | 105,500 |
| June | 28,056 | 1,560 | 392 | 935 | 55,650 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1936-37 | 126,276 | ..... | ..... | ..... | 250,520 |
| **1940-41** | | | | | |
| April (15 days) | 96,080 | 11,400 | 3,720 | 6,405 | 190,600 |
| May (19 days) | 53,190 | 4,000 | 1,790 | 2,799 | 105,500 |
| June (20 days) | 124,970 | 9,460 | 2,560 | 6,248 | 247,900 |
| July (1 day) | 1,980 | ..... | ..... | ..... | ..... |
| One reading July 1st | | | | | |
| Water year 1940-41 | 274,240 | ..... | ..... | ..... | 544,000 |
| *Note: Gage read only at high stages | | | | | |
| **1941-42** | | | | | |
| April | 204,580 | 11,900 | 3,240 | 6,819 | 405,800 |
| May | 198,540 | 10,800 | 3,720 | 6,404 | 393,800 |
| June | ..... | ..... | ..... | ..... | ..... |
| July | 52,530 | 2,080 | 1,450 | 1,695 | 104,200 |
| August | ..... | ..... | ..... | ..... | ..... |
| September (8 days) | 21,180 | 3,000 | 2,400 | 2,648 | 42,010 |
| Water year 1941-42 | 476,830 | ..... | ..... | ..... | 945,810 |

*Note: Gage read only at high stages

| | | | | | |
|---|---|---|---|---|---|
| 1942-43 | | | | | |
| March (3 days) | 14,310 | ..... | ..... | 4,770 | 28,380 |
| April (26 days) | 531,070 | 27,300 | ..... | 20,430 | 1,053,000 |
| Water year 1942-43 | 545,380 | ..... | ..... | ..... | 1,081,380 |

*Note: Gage read only at high stages

| | | | | | |
|---|---|---|---|---|---|
| 1943-44 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 12-30 | 97,860 | 10,500 | ..... | 5,151 | 194,100 |
| May | 115,920 | 5,260 | 2,860 | 3,739 | 229,900 |
| June | 158,200 | 5,890 | 4,600 | 5,273 | 313,800 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1943-44 | ..... | ..... | ..... | ..... | 737,800 |

## FOREST RIVER NEAR FORDVILLE, NORTH DAKOTA

Location: Chain gage lat. 48°12′, long. 97°44′, on line between secs. 32, 33 T. 155N R. 55W. at highway bridge a quarter of a mile downstream from South Branch of Forest River and 3 miles southeast of Fordville.

Drainage Area: 491 square miles.

Records available: April 1940 to September 1944

Extremes: Maximum daily discharge, 3,650 second-feet April 4, 1942, no flow April 1-13, Sept. 3, 1940.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1939-40** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 14-30 | 648.8 | 110 | ..... | 21.6 | 1,290 |
| May | 225.8 | 13 | 3.8 | 7.28 | 448 |
| June | 82.2 | 4.4 | 1.8 | 2.74 | 163 |
| July | 250.6 | 90 | .8 | 8.08 | 497 |
| August | 216.2 | 35 | 1 | 6.97 | 429 |
| September | 27.4 | 1.5 | ..... | .91 | 54 |
| Water year 1939-40 | 1,451 | 110 | ..... | ..... | 2,881 |
| **1940-41** | | | | | |
| October | 47.2 | 2.2 | .4 | 1.52 | 94 |
| November | 61 | 2.2 | 1.8 | 2.03 | 121 |
| December | 63.9 | 2.8 | 1.5 | 2.06 | 127 |
| January | 83.8 | 2.8 | 2.6 | 2.7 | 166 |
| February | 81.5 | ..... | ..... | 2.91 | 162 |
| March | 126.1 | 10 | 3 | 4.07 | 250 |
| April | 13,883 | 2,200 | 16 | 463 | 27,540 |
| May | 301 | 16 | 2.5 | 9.71 | 597 |
| June | 676.9 | 42 | 6.3 | 22.6 | 1,340 |
| July | 103.4 | 16 | 1.1 | 3.34 | 205 |
| August | 78.9 | 7.5 | .3 | 2.55 | 156 |
| September | 360.7 | 46 | 1.5 | 12 | 715 |
| Water year 1940-41 | 15,867.4 | 2,200 | .3 | 43.5 | 31,470 |
| **1941-42** | | | | | |
| October | 773.1 | 91 | 5.7 | 24.9 | 1,530 |
| November | 267.7 | 13 | 5.5 | 8.92 | 531 |
| December | 152.4 | 7.5 | 2 | 4.92 | 302 |
| January | 97 | 4.4 | 1.6 | 3.13 | 192 |
| February | 100.8 | 4 | 2.8 | 3.6 | 200 |
| March | 4,858.4 | 650 | 4 | 157 | 9,640 |
| April | 11,049 | 2,980 | 40 | 368 | 21,920 |
| May | 803 | 56 | 17 | 259 | 1,590 |
| June | 286.9 | 21 | 4.7 | 9.56 | 569 |
| July | 206.3 | 57 | 2.6 | 6.65 | 409 |
| August | 368.2 | 28 | 3.8 | 11.9 | 730 |
| September | 109.6 | 7.6 | 2 | 3.65 | 217 |
| Water year 1941-42 | 19,072.4 | 2,980 | 1.6 | 52.3 | 37,830 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1942-43 | | | | | |
| October | 83.8 | 2.8 | 2.6 | 2.7 | 166 |
| November | 87.4 | 3.8 | 2.6 | 2.91 | 173 |
| December | 94.6 | 3.4 | 2.6 | 3.05 | 188 |
| January | 101 | 4.2 | 2.6 | 3.26 | 200 |
| February | 105.8 | 4.4 | 3.2 | 3.78 | 210 |
| March | 4,145.6 | 950 | 3.2 | 134 | 8,220 |
| April | 1,231 | 150 | 12 | 41 | 2,440 |
| May | 437.5 | 30 | 8.5 | 14.1 | 868 |
| June | 4,627 | 1,030 | 32 | 154 | 9,180 |
| July | 4,492 | 1,080 | 21 | 145 | 8,910 |
| August | 321.5 | 17 | 5.5 | 10.4 | 638 |
| September | 159.9 | 13 | 2.6 | 53.3 | 317 |
| Water year 1942-43 | 15,887.1 | 1,080 | 2.6 | 43.5 | 31,510 |
| 1943-44 | | | | | |
| October | 138.2 | 7.5 | 2.6 | 4.46 | 274 |
| November | 146.7 | 6 | 3.2 | 4.89 | 291 |
| December | 150.6 | ..... | 3.6 | 4.86 | 299 |
| January | 122.2 | 5.5 | 2.2 | 3.94 | 242 |
| February | 81.4 | 3.8 | 1.8 | 2.81 | 161 |
| March | 176.5 | 10 | 2.6 | 5.69 | 350 |
| April | 2,491 | 360 | ..... | 83 | 4,940 |
| May | 418 | 25 | 6 | 13.5 | 829 |
| June | 516.3 | 42 | 7.5 | 17.2 | 1,020 |
| July | 163.3 | 9.3 | 3.8 | 5.27 | 324 |
| August | 136.7 | 7.5 | .8 | 4.41 | 271 |
| September | 143.3 | 7.9 | 3.2 | 4.78 | 284 |
| Water year 1943-44 | 4,684.2 | 360 | .8 | 12.8 | 9,280 |

## FOREST RIVER NEAR MINTO, NORTH DAKOTA

Location: Chain gage, lat. 48°16′, long. 97°24′, on line between secs. 1 and 12, T. 155 N. R. 53W, 3 miles southwest of Minto.

Drainage Area: 538 square miles

Records Available: March 1932 to September 1944

Extremes: Maximum discharge observed, 1,610 second feet April 5, 1942; no flow on many days each year.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1931-32** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 30-31 | 258 | ..... | ..... | 129 | 512 |
| April | 2,737 | 265 | 41 | 91.2 | 5,430 |
| May | 908 | 44 | 16 | 29.3 | 1,800 |
| June | 338.4 | 15 | 7.1 | 11.3 | 672 |
| July | 157 | 9.2 | 1.5 | 5.06 | 311 |
| August | 12.2 | 1.5 | 0 | .39 | 24 |
| September | 4.9 | 1.2 | 0 | .16 | 10 |
| Water year 1931-32 | 4,415.5 | 265 | 0 | 23.9 | 8,750 |
| *185 Day Record | | | | | |
| **1932-33** | | | | | |
| October | 126.6 | 10 | 0 | 4.08 | 251 |
| November | 15 | ..... | ..... | ..... | 30 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 1,529 | 235 | ..... | 51 | 3,030 |
| April | 4,607 | 628 | 36 | 154 | 9,160 |
| May | 744 | 35 | 18 | 24 | 1,480 |
| June | 321.9 | 18 | 5.4 | 10.7 | 637 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1932-33 | 7,343.5 | ..... | ..... | ..... | 14,588 |
| *152 Day Record | | | | | |
| **1933-34** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 212 | 29 | 17 | 21.2 | 420 |
| April | 1,181 | 79 | 16 | 39.4 | 2,340 |
| May | 329.9 | 16 | 6.1 | 10.6 | 654 |
| June | 150.5 | 7.9 | 2.5 | 5.02 | 299 |
| July | 26.9 | 2.4 | 0 | .87 | 53 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1933-34 | 1,900.3 | ..... | ..... | ..... | 3,766 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1934-35** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 1,857 | 366 | 35 | 124 | 3,680 |
| April | 1,209 | 102 | 23 | 40.3 | 2,400 |
| May | 445 | 20 | 10 | 14.4 | 883 |
| June | 261.6 | 15 | 6.4 | 8.72 | 519 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| *Water year 1934-35 | 3,772.6 | ..... | ..... | ..... | 7,480 |
| *106 Day Record | | | ---- | | |
| **1935-36** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 14-30 | 3,200 | 552 | 0 | 107 | 6,350 |
| May | 555.7 | 34 | 8.6 | 17.9 | 1,100 |
| June | 249.8 | 14 | 5 | 8.33 | 495 |
| July 1-13 | 43.3 | 7.8 | 0 | 1.4 | 86 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1935-36 | 4,048.8 | ..... | ..... | ..... | 8,030 |
| **1936-37** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 427 | 72 | 0 | 14.2 | 847 |
| May | 314.9 | 17 | 5.1 | 10.2 | 625 |
| June | 193.1 | 12 | .6 | 6.44 | 383 |
| July | 15.7 | 1.7 | 0 | .51 | 31 |
| August | 3.4 | .5 | 0 | .11 | 6.7 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1936-37 | 954.1 | 72 | 0 | 26.1 | 1,890 |
| **1937-38** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 14-31 | 746 | 148 | 0 | 24.1 | 1,480 |
| April | 331.3 | 18 | 7.6 | 11 | 657 |
| May | 280.9 | 16 | 4.7 | 9.06 | 557 |
| June | 72.2 | 5 | .8 | 2.41 | 143 |
| July 1-20 | 43.3 | 7.1 | 0 | 1.4 | 86 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1937-38 | 1,473.7 | 148 | 0 | 4.04 | 2,920 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1938-39** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 28-31 | 640 | 180 | ..... | 20.6 | 1,270 |
| April | 1,141 | 100 | 15 | 38 | 2,260 |
| May | 214.7 | 15 | 3.5 | 6.93 | 426 |
| June | 48.4 | 5.4 | .1 | 1.61 | 96 |
| July | 407.2 | 118 | .1 | 13.1 | 808 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1938-39 | 2,451.3 | 180 | ..... | 6.71 | 4,860 |
| **1939-40** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 14-30 | 1,252 | 237 | ..... | 41.7 | 2,480 |
| May | 347.3 | 22 | 5.1 | 11.2 | 689 |
| June | 93.4 | 5.2 | ..... | 3.11 | 185 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | 408.9 | 93 | ..... | 13.2 | 811 |
| September 1-21 | 6.5 | 2.4 | ..... | .217 | 13 |
| Water year 1939-40 | 2,108.1 | 237 | ..... | 5.76 | 4,178 |
| **1940-41** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 10,479 | 1,390 | ..... | 349.3 | 20,800 |
| May | 674 | 41 | 13 | 21.7 | 1,340 |
| June | 662 | 37 | 12 | 22.1 | 1,310 |
| July | 232.3 | 15 | 2 | 749 | 461 |
| August | 109.7 | 4.2 | 2.2 | 3.54 | 218 |
| September | 272.6 | 21 | 3.5 | 9.09 | 541 |
| Water year 1940-41 | 12,417.6 | 1,390 | ..... | 34 | 24,670 |
| **1941-42** | | | | | |
| October | 998 | ..... | ..... | 32.2 | 1,980 |
| November | 335 | ..... | ..... | 11.2 | 664 |
| December | 181.3 | ..... | ..... | 5.85 | 360 |
| January | 9.9 | ..... | ..... | .32 | 20 |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 3,933.7 | 500 | ..... | 127 | 7,800 |
| April | 10,662 | 1,550 | 65 | 355 | 21,150 |
| May | 1,207 | 70 | 22 | 38.9 | 2,390 |
| June | 434 | 26 | 6.5 | 14.5 | 861 |
| July | 228.2 | 44 | 4.2 | 7.36 | 453 |
| August | 472.3 | 40 | 4.8 | 15.2 | 937 |
| September | 140.8 | 11 | 2.2 | 4.69 | 279 |
| Water year 1941-42 | 18,602.2 | 1,550 | ..... | 51 | 36,890 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre Feet |
|---|---|---|---|---|---|
| **1942-43** | | | | | |
| October | 90.2 | 3.4 | 2.2 | 2.91 | 179 |
| November | 105 | 3.6 | 3.2 | 3.5 | 208 |
| December | 59.3 | 3.2 | 1.4 | 1.91 | 118 |
| January | 39.5 | 1.4 | 1.1 | 1.27 | 78 |
| February | 31 | 1.3 | 1 | 1.11 | 61 |
| March | 4,436 | 800 | 1 | 143 | 8,800 |
| April | 2,958 | 350 | 30 | 98.6 | 5,870 |
| May | 732 | 32 | 17 | 23.6 | 1,450 |
| June | 5,770 | 800 | 50 | 192 | 11,440 |
| July | 5,643 | 1,200 | 36 | 182 | 11,190 |
| August | 630 | 38 | 12 | 20.3 | 1,250 |
| September | 288 | 24 | 2.4 | 9.6 | 571 |
| Water year 1942-43 | 20,782.4 | 1,200 | 1 | 56.9 | 41,220 |
| **1943-44** | | | | | |
| October | 85 | 4.6 | 2.6 | 2.74 | 169 |
| November | 152.8 | 6 | 2.6 | 5.09 | 303 |
| December | 142.1 | 7 | 1.7 | 4.58 | 282 |
| January | 21.5 | 2.6 | .1 | .69 | 43 |
| February | .8 | .1 | 0 | .03 | 1.6 |
| March | 7.9 | ..... | ..... | .25 | 16 |
| April | 2,776 | 400 | ..... | 92.5 | 5,510 |
| May | 682 | 30 | 14 | 22 | 1,350 |
| June | 769 | 50 | 14 | 25.6 | 1,530 |
| July | 294.6 | 24 | .9 | 9.5 | 584 |
| August | 109.4 | 14 | .5 | 3.53 | 217 |
| September | 206.4 | 14 | 4 | 6.88 | 409 |
| Water year 1943-44 | 5,247.5 | 400 | ..... | 14.3 | 10,410 |

## SO. BRANCH PARK RIVER NEAR PARK RIVER, NORTH DAKOTA

Location: Chain gage, lat. 48°24′, long. 97°50′, on line between secs. 15 and 16 T. 157 N., R. 56 W. at highway bridge half a mile upstream from small unnamed creek and 4½ miles northwest of town of Park River

Drainage Area: 255 square miles

Records available: March 1940 to September 1944

Extremes: Maximum discharge 1,650 second-feet April 10, 1941; no flow during several months of each year.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1939-40** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 532.4 | 162 | ..... | 17.7 | 1,060 |
| May | 70.8 | 6.7 | 1.1 | 2.28 | 140 |
| June | 5.4 | 1 | ..... | .18 | 11 |
| July | .6 | .2 | ..... | .02 | 1.2 |
| August | 1.3 | .2 | ..... | .04 | 2.6 |
| September | .7 | .2 | ..... | .02 | 1.4 |
| Water year 1939-40 | 611.2 | 162 | 0 | ..... | 1,216.2 |
| **1940-41** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 8,779.3 | 1,420 | .3 | 293 | 17,410 |
| May | 178.9 | 12 | 3.3 | 5.77 | 355 |
| June | 120.4 | 10 | 1.2 | 4.01 | 239 |
| July | 18.4 | 2.7 | .1 | .59 | 36 |
| August | 24.4 | 5.6 | .1 | .79 | 48 |
| September | 522.8 | 100 | .1 | 17.4 | 1,040 |
| Water year 1940-41 | 9,644.2 | 1,420 | ..... | 26.4 | 19,130 |
| **1941-42** | | | | | |
| October | 606.4 | 106 | 4.4 | 19.6 | 1,200 |
| November | 112.3 | 5.9 | 1.6 | 3.74 | 223 |
| December | 43.4 | 4.1 | ..... | 1.4 | 86 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 1,825.4 | 440 | 1 | 58.9 | 3,620 |
| April | 7,379 | 950 | 26 | 246 | 14,640 |
| May | 497.3 | 34 | 8.4 | 16 | 986 |
| June | 168.1 | 17 | 1.8 | 5.6 | 333 |
| July | 24.6 | 1.8 | .1 | .79 | 49 |
| August | 52.4 | 22 | .1 | 1.69 | 104 |
| September | 51 | 8.2 | .1 | 1.7 | 101 |
| Water year 1941-42 | 10,759.9 | 950 | ..... | 29.5 | 21,340 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre Feet |
|---|---|---|---|---|---|
| **1942-43** | | | | | |
| October | 6.6 | .3 | .1 | .21 | 13 |
| November | 5.4 | .3 | .1 | .18 | 11 |
| December | 6.2 | ..... | ..... | .2 | 12 |
| January | 6.2 | ..... | ..... | .2 | 12 |
| February | 5.6 | ..... | ..... | .2 | 11 |
| March | 2,980.14 | 550 | ..... | 96.1 | 5,910 |
| April | 1,915 | 220 | 5.4 | 63.8 | 3,800 |
| May | 247.3 | 19 | 3.9 | 7.98 | 491 |
| June | 1,686.2 | 202 | 7.2 | 56.2 | 3,340 |
| July | 456.8 | 87 | 1.1 | 14.7 | 906 |
| August | 10.6 | 1.1 | .1 | .34 | 21 |
| September | 5.7 | .3 | .1 | .19 | 11 |
| Water year 1942-43 | 7,332 | 550 | .1 | 20.1 | 14,540 |
| **1943-44** | | | | | |
| October | 8.1 | .4 | .2 | .26 | 16 |
| November | 8.3 | .4 | ..... | .28 | 16 |
| December | 2.2 | ..... | ..... | .07 | 4.4 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 1,019.9 | 170 | ..... | 34 | 2,020 |
| May | 77.7 | 5.4 | .9 | 2.51 | 154 |
| June | 54.7 | 3.9 | .4 | 1.82 | 108 |
| July | 7.6 | .5 | .1 | .25 | 15 |
| August | 178 | 28 | .2 | 5.74 | 353 |
| September | 191.6 | 39 | .6 | 6.39 | 380 |
| Water year 1943-44 | 1,548.1 | 170 | 0 | 4.23 | 3,070 |

## PARK RIVER AT GRAFTON, NORTH DAKOTA

Location: Staff gage and rubble masonry control dam lat. 48°25′, long. 97°24′, in NE¼NW¼ sec. 18, T. 157 N., R. 52 W. at Grafton.

Drainage area: 753 square miles.

Records available: April 1931, to September 1944 (incomplete prior to 1937)

Extremes: Maximum discharge 4,310 second-feet April 6, 1942; no flow at times.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1930-31** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 41 | ..... | ..... | 20.5 | 81 |
| May | 386.2 | 22 | 6.5 | 12.5 | 769 |
| June | 91.2 | 6.9 | 1 | 3.04 | 181 |
| July | 30.5 | 4.4 | .1 | .98 | 60 |
| August | 6 | .6 | ..... | .19 | 12 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1930-31 | 554.9 | ..... | ..... | ..... | 1,100 |
| 123 day record | | | | | |
| **1931-32** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March (2 Days) | 135 | ..... | ..... | 67.5 | 268 |
| April | 4,656 | 550 | 9 | 155 | 9,220 |
| May | 673.4 | 42 | 7.3 | 21.7 | 1,330 |
| June | 167.5 | 21 | .4 | 5.58 | 332 |
| July | 8.3 | 1.1 | ..... | .27 | 17 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1931-32 | 5,640.2 | 550 | 0 | 30.5 | 11,167 |
| **1932-33** | | | | | |
| October 18-31 | 27.9 | 3.9 | .7 | 1.99 | 55 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 29-31 | 1,106 | 819 | 58 | 369 | 2,200 |
| April | 12,341 | 2,010 | 42 | 411 | 24,500 |
| May | 690 | 38 | 13 | 22.3 | 1,370 |
| June | 367.2 | 34 | .07 | 12.2 | 726 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1932-33 | 14,531.1 | ..... | ..... | ..... | 28,851 |
| 108 day record | | | | | |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1933-34** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March (10 days) | 216 | 32 | 16 | 21.6 | 428 |
| April | 2,340.3 | 393 | 7.1 | 78 | 4,640 |
| May | 67 | 6.5 | .3 | 2.16 | 133 |
| June | 12.4 | 1 | ..... | .41 | 25 |
| July | 4 | .1 | ..... | .01 | 1 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | 24 | .8 | ..... | .08 | 5 |
| Water year 1933-34 | 2,638.5 | ..... | ..... | ..... | 5,230 |
| 193 day record | | | | | |
| **1934-35** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 19-31 | 2,049 | 443 | 40 | 158 | 4,060 |
| April | 1,977 | 196 | 20 | 65.9 | 3,920 |
| May | 188.3 | 20 | 1.2 | 6.07 | 373 |
| June | 117.2 | 18 | .4 | 3.91 | 232 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1934-35 | 4,331.5 | ..... | ..... | ..... | 8,580 |
| 104 day record | | | | | |
| **1935-36** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 11-30 | 6,811 | 1,140 | ..... | 227 | 13,510 |
| May | 373.3 | 38 | 1.4 | 12 | 740 |
| June | 389.4 | 148 | ..... | 13 | 772 |
| July | 1.1 | .7 | ..... | .04 | 2.2 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1935-36 | 7,573.7 | ..... | ..... | ..... | 15,020 |
| **1936-37** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 10-30 | 2,705 | 306 | ..... | 90.2 | 5,370 |
| May | 654.5 | 67 | 2.8 | 21.1 | 1,300 |
| June | 110.8 | 11 | ..... | 3.69 | 220 |
| July | 147.4 | 32 | ..... | 4.75 | 292 |
| August | 36.3 | 5 | ..... | 1.17 | 72 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1936-37 | 3,654 | 306 | 0 | 10 | 7,250 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Runoff in Acre-Feet |
|---|---|---|---|---|---|
| **1937-38** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 1,665 | 291 | ..... | 53.7 | 3,300 |
| April | 161.9 | 12 | 2.3 | 5.4 | 321 |
| May | 182.4 | 21 | 1 | 5.88 | 362 |
| June | 10.4 | 1.8 | ..... | .35 | 21 |
| July | 146 | 88 | ..... | 4.71 | 290 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1937-38 | 2,165.7 | 291 | ..... | 5.93 | 4,290 |
| **1938-39** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 272 | 130 | ..... | 8.77 | 540 |
| April | 709.7 | 80 | 7.7 | 23.7 | 1,408 |
| May | 63.6 | 7.7 | 1 | 2.05 | 126 |
| June | 85 | 20 | ..... | 2.83 | 169 |
| July | 3.8 | 1 | ..... | .12 | 7.5 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1938-39 | 1,134.1 | 130 | ..... | 3.11 | 2,250 |
| **1939-40** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 1,141 | 190 | ..... | 38 | 2,260 |
| May | 130.3 | 9.2 | 1.2 | 4.2 | 258 |
| June | 11.3 | 2.1 | ..... | .38 | 22 |
| July | 4.2 | 2.1 | ..... | .14 | 8.3 |
| August | 8.4 | 1.5 | ..... | .27 | 17 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1939-40 | 1,295.2 | 190 | 0 | 3.55 | 2,565.3 |
| **1940-41** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 11.7 | 1.1 | ..... | .38 | 23 |
| April | 17,320.5 | 1,830 | 1.1 | 577 | 34,350 |
| May | 545.7 | 41 | 5.7 | 17.6 | 1,080 |
| June | 358.8 | 21 | 4 | 12 | 712 |
| July | 46 | 6.3 | ..... | 1.48 | 91 |
| August | 7 2 | .8 | ..... | .23 | 14 |
| September | 607.1 | 75 | ..... | 20.2 | 1,200 |
| Water year 1940-41 | 18,897 | 1,830 | 0 | 52.7 | 37,400 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre Feet |
|---|---|---|---|---|---|
| **1941-42** | | | | | |
| October | 1,015 | 99 | 11 | 32.7 | 2,010 |
| November | 251.9 | 13 | 4 | 8.4 | 500 |
| December | 96.7 | 7.7 | ..... | 3.12 | 192 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 3,710.4 | 550 | ..... | 120 | 7,360 |
| April | 26,184 | 3,190 | 97 | 873 | 51,940 |
| May | 1,849 | 106 | 33 | 59.6 | 3,670 |
| June | 491.6 | 38 | 5.1 | 16.4 | 975 |
| July | 108 | 9.4 | 1.6 | 3.48 | 214 |
| August | 104.8 | 16 | 1.6 | 3.38 | 208 |
| September | 98.6 | 13 | .1 | 3.29 | 196 |
| Water year 1941-42 | 33,910 | 3,190 | 0 | 92.9 | 67,270 |
| **1942-43** | | | | | |
| October | 8.5 | .8 | ..... | .27 | 17 |
| November | 21.8 | 1.1 | ..... | .73 | 43 |
| December | 1.4 | .2 | ..... | .05 | 2.8 |
| January | 3 | .6 | ..... | .1 | 6 |
| February | 3 | .4 | ..... | .11 | 6 |
| March | 7,949.1 | 1,400 | ..... | 256 | 15,770 |
| April | 5,104 | 900 | 16 | 170 | 10,120 |
| May | 934 | 37 | 24 | 30.1 | 1,850 |
| June | 6,069 | 369 | 37 | 202 | 12,040 |
| July | 4,668 | 594 | 59 | 151 | 9,260 |
| August | 393.6 | 52 | .2 | 12.7 | 781 |
| September | 7.6 | 1.1 | ..... | .25 | 15 |
| Water year 1942-43 | 25,163 | 1,400 | 0 | 68.9 | 49,910 |
| **1943-44** | | | | | |
| October | .5 | .1 | 0 | .02 | 1 |
| November | 22.5 | 1.9 | .1 | .75 | 45 |
| December | 21.9 | 1.9 | 0 | .71 | 43 |
| January | .2 | .1 | 0 | .01 | .4 |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 10.1 | 1.6 | 0 | .33 | 20 |
| April | 3,225 | 494 | .4 | 108 | 6,400 |
| May | 220.4 | 17 | 3 | 7.11 | 437 |
| June | 249.5 | 15 | 4 | 8.32 | 495 |
| July | 74.9 | 8.5 | 0 | 2.42 | 149 |
| August | 354.4 | 46 | 0 | 11.4 | 703 |
| September | 234.4 | 15 | 2.4 | 7.81 | 465 |
| Water year 1943-44 | 4,413.8 | 494 | 0 | 12.1 | 8,760 |

## RED RIVER AT DRAYTON, NORTH DAKOTA

Location: Wire-weight gage, lat. 48°34′, long. 97°10′, in sec. 26, T. 159N.R. 51W on highway bridge in Drayton.

Drainage Area: 34,800 square miles.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1935-36** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 173,032 | 16,600 | 78 | 5,768 | 343,200 |
| May | 56,600 | 4,000 | 920 | 1,826 | 112,300 |
| June | 11,967 | 770 | 177 | 399 | 23,740 |
| July | 3,653 | 183 | 60 | 118 | 7,250 |
| August | 1,554 | 65 | 36 | 50.1 | 3,080 |
| September | 821 | 38 | 14 | 27.4 | 1,630 |
| Water year 1935-36 | 247,627 | ..... | ..... | ..... | 491,200 |
| **1936-37** | | | | | |
| October | 426.5 | 18 | 7.7 | 13.8 | 846 |
| November 1-15 | 241 | 17 | 15 | 16.1 | 478 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 51,876 | 3,920 | 72 | 1,729 | 102,900 |
| May | 60,498 | 4,500 | 678 | 1,952 | 120,000 |
| June | 29,052 | 1,520 | 534 | 968 | 57,620 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1936-37 | 142,093.5 | ..... | ..... | ..... | 281,844 |

Discontinued

1941-1942-1943 Fragmentary

| | | | | | |
|---|---|---|---|---|---|
| **1941** | | | | | |
| April 16-30 | 161,960 | 21,000 | 4,220 | 10,800 | 321,200 |
| May 1-15 | 40,930 | 4,030 | 1,800 | 2,729 | 81,180 |
| June 13-30 | 119,930 | 9,780 | 2,960 | 6,663 | 237,900 |
| Water year 1941 | 322,820 | ..... | ..... | ..... | 640,280 |
| **1942** | | | | | |
| April | 341,990 | 21,900 | 3,400 | 11,400 | 678,300 |
| May 1-30 | 213,080 | 12,000 | 4,090 | 7,103 | 422,600 |
| June | ..... | ..... | ..... | ..... | ..... |
| July 1-20 | 34,740 | 1,950 | 1,420 | 1,737 | 68,910 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | 16,600 | 3,040 | 2,460 | 2,767 | 32,930 |
| Water year 1942 | 606,410 | ..... | ..... | ..... | 1,202,740 |
| **1943** | | | | | |
| April 7-30 | 533,740 | 28,700 | 8,560 | 22,240 | 1,059,000 |

1943-1944 Record too fragmentary and will not be published

## TONGUE RIVER AT CAVALIER, NORTH DAKOTA

Location: Wire weight gage, lat. 48°48′, long. 97°37′, on line between NE¼ and SE¼ Sec. 4, T. 161 N. R. 54W, on State Highway 5 in Cavalier.

Records Available: October 1938 to September 1944.

Extremes: Maximum discharge 960 second-feet April 14, 1942; no flow for several months in each year.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1938-39** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 15 | .15 | 0 | .48 | 30 |
| April | 426.5 | 30 | 5 | 14.2 | 846 |
| May | 89 | 6.1 | 1.4 | 2.87 | 177 |
| June | 38.5 | 4 | .5 | 1.28 | 76 |
| July | 2.7 | .6 | 0 | .09 | 5.4 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1938-39 | 571.7 | 30 | 0 | 1.57 | 1,130 |
| **1939-40** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 1,135 | 230 | 0 | 37.8 | 2,250 |
| May | 167.7 | 24 | 1.6 | 5.41 | 333 |
| June | 37.1 | 2.5 | .4 | 1.24 | 74 |
| July | 8.1 | .5 | .1 | .26 | 16 |
| August | 4.8 | 1.2 | 0 | .15 | 9.5 |
| September | .2 | .1 | 0 | .01 | .4 |
| Water year 1939-40 | 1,352.9 | 230 | 0 | 3.70 | 2,682.9 |
| **1940-41** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | .2 | .1 | 0 | .007 | .4 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 4,366 | 650 | 0 | 146 | 8,660 |
| May | 297.5 | 19 | 2.6 | 9.6 | 590 |
| June | 529.5 | 122 | 2.4 | 11.7 | 1,050 |
| July | 43.5 | 7.3 | 0 | 1.40 | 86 |
| August | 2.3 | .2 | 0 | .07 | 4.6 |
| September | 504.7 | 55 | .2 | 16.8 | 1,000 |
| Water year 1940-41 | 5,743.8 | 650 | 0 | 15.7 | 11,390 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1941-42** | | | | | |
| October | 442 | ..... | ..... | 14.3 | 877 |
| November | 152 | ..... | ..... | 5.07 | 301 |
| December | 93.5 | ..... | ..... | 3.02 | 185 |
| January | 46.7 | ..... | ..... | 1.51 | 93 |
| February | 8.4 | ..... | ..... | .30 | 17 |
| March | 817.1 | 200 | ..... | 26.4 | 1,620 |
| April | 8,022 | 960 | 16 | 267 | 15,910 |
| May | 1,847 | 125 | 36 | 59.6 | 3,660 |
| June | 532.5 | 36 | 8 | 17.8 | 1,060 |
| July | 102.8 | 9.5 | .7 | 3.32 | 204 |
| August | 648.1 | 140 | .9 | 20.9 | 1,290 |
| September | 396 | 110 | 1 | 13.2 | 785 |
| Water year 1941-42 | 13,108.1 | 960 | 0 | 35.9 | 26,000 |
| **1942-43** | | | | | |
| October | 78.7 | 3.8 | .1 | 2.54 | 156 |
| November | 83.7 | 3.8 | .6 | 2.79 | 166 |
| December | 16.4 | .7 | .2 | .53 | 33 |
| January | 20.6 | .9 | ..... | .66 | 41 |
| February | 9.1 | ..... | ..... | .32 | 18 |
| March | 1,844.7 | 460 | ..... | 59.5 | 3,660 |
| April | 2,574 | 240 | 22 | 85.8 | 5,110 |
| May | 918 | 44 | 15 | 29.6 | 1,820 |
| June | 2,945 | 433 | 20 | 98.2 | 5,840 |
| July | 958.5 | 260 | 4.4 | 30.9 | 1,900 |
| August | 52.8 | 3.7 | .7 | 1.7 | 105 |
| September | 17.8 | 1.3 | .1 | .59 | 35 |
| Water year 1942-43 | 9,519.3 | 460 | ..... | 26.1 | 18,880 |
| **1943-44** | | | | | |
| October | 26.2 | 2 | .1 | .85 | 52 |
| November | 60.2 | 2.2 | 1.9 | 2.01 | 119 |
| December | 39.2 | 2 | .4 | 1.26 | 78 |
| January | 16.6 | 4.4 | ..... | .54 | 33 |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 1,949 | 420 | 0 | 65 | 3,870 |
| May | 338 | 16 | 5 | 10.9 | 670 |
| June | 323 | 26 | 3 | 10.8 | 641 |
| July | 246.9 | 38 | 2.4 | 7.96 | 490 |
| August | 313.8 | 38 | 1.6 | 10.1 | 622 |
| September | 706.5 | 120 | 5 | 23.6 | 1,400 |
| Water year 1943-44 | 4,019.4 | 420 | 0 | 11 | 7,980 |

## TONGUE RIVER AT PEMBINA, NORTH DAKOTA

Location: Lat. 48°55'08", long. 97°19'30" in NW NW¼NE¼ sec. 26 T. 163N, R. 52W 3¼ miles upstream from mouth and 5 miles southwest of Pembina.

Drainage Area: 491 square miles.

Records Available: October 1939 to September 1942

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1939-40** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 1,073 | 192 | 0 | 35.8 | 2,128 |
| May | 225.6 | 30 | 1.3 | 7.28 | 447 |
| June | 3.5 | 1.3 | 0 | .12 | 6.9 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1939-40 | 1,302.1 | 192 | 0 | 3.56 | 2,581.9 |
| **1940-41** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 7,881.2 | 1,110 | 0 | 263 | 15,630 |
| May | 307.7 | 28 | 1.9 | 9.33 | 610 |
| June | 464 | 58 | 4.2 | 15.5 | 920 |
| July | 105.1 | 11 | 0 | 3.39 | 208 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | 399.4 | 66 | ..... | 13.3 | 792 |
| Water year 1940-41 | 9,157.4 | 1,110 | 0 | 25.1 | 18,160 |
| **1941-42** | | | | | |
| October | 728 | 71 | 9.6 | 23.5 | 1,440 |
| November | 145.4 | 9.6 | 3.6 | 4.85 | 288 |
| December | 62.9 | 3.6 | 1.3 | 2.03 | 125 |
| January | 29.7 | 1.3 | .4 | .96 | 59 |
| February | 1.2 | .3 | ..... | .04 | 2.4 |
| March | 453.4 | 79 | 0 | 14.6 | 899 |
| April | 17,875 | 1,400 | 90 | 596 | 35,450 |
| May | 2,270 | 133 | 36 | 73.2 | 4,500 |
| June | 578.9 | 48 | 5 | 19.3 | 1,150 |
| July | 79.3 | 5 | .9 | 2.56 | 157 |
| August | 746.3 | 122 | 2.6 | 24.1 | 1,480 |
| September | 558.8 | 74 | .7 | 18.6 | 1,110 |
| Water year 1941-42 | 23,528.9 | 1,400 | 0 | 64.5 | 46,660.1 |

## PEMBINA RIVER NEAR MANITOU, MANITOBA

Location: Lat. 49°08'50", long. 98°33'30" on bridge near Lea's farm, 9 miles south of Manitou.

Drainage: 2,060 square miles.

Records available: October 1929 to September 1944 (incomplete)

Extremes: Maximum discharge 1,620 second-feet April 19, 1923; no flow on many days.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1929-30** | | | | | |
| October | ..... | 5 | 1.2 | 3.2 | 197 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | ..... | ..... | 524 | 31,200 |
| May | ..... | 437 | 218 | 329 | 20,200 |
| June | ..... | 204 | 46.5 | 121 | 7,200 |
| July | ..... | 45.4 | 16.8 | 31.9 | 1,960 |
| August | ..... | 18.1 | 14.5 | 16.7 | 1,030 |
| September | ..... | 24 | 13.7 | 17.9 | 1,070 |
| Water year 1929-30 | ..... | ..... | ..... | ..... | ..... |
| **1930-31** | | | | | |
| October | ..... | 25.5 | 21.7 | 23.8 | 1,460 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 161 | 91 | 130 | 7,740 |
| May | ..... | 83 | 39 | 63 | 3,870 |
| June | ..... | 36.2 | 9.4 | 20 | 1,190 |
| July | ..... | 10.1 | .3 | 3.2 | 197 |
| August | ..... | 1.5 | .1 | .6 | 37 |
| September | ..... | 1.1 | .3 | .6 | 36 |
| Water year 1930-31 | ..... | ..... | ..... | ..... | ..... |
| **1931-32** | | | | | |
| October | ..... | 7.6 | .2 | 1.63 | 100 |
| November 1-12 | ..... | 6.5 | 2.5 | 4.60 | 109 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 13-30 | ..... | 303 | 174 | 228 | 8,140 |
| May | ..... | 168 | 72 | 117 | 7,190 |
| June | ..... | 67 | 14.1 | 35.4 | 2,110 |
| July | ..... | 22 | 12.9 | 15.9 | 978 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1931-32 | ..... | ..... | ..... | ..... | ..... |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1932-33** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 10-30 | ..... | 554 | 450 | 503 | 20,900 |
| May | ..... | 884 | 260 | 408 | 25,100 |
| June | ..... | 358 | 86 | 197 | 11,700 |
| July | ..... | 83 | 29.9 | 46.8 | 2,880 |
| August | ..... | 29.8 | 17 | 22.7 | 1,400 |
| September | ..... | 55 | 21.5 | 39.2 | 2,330 |
| Water year 1932-33 | ..... | ..... | ..... | ..... | ..... |
| **1933-34** | | | | | |
| October | ..... | 52 | 30.3 | 39.3 | 2,420 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 9-30 | ..... | 369 | 166 | 253 | 11,000 |
| May | ..... | 158 | 71 | 111 | 6,830 |
| June | ..... | 68 | 17.3 | 41 | 2,440 |
| July | ..... | 17.9 | 2.4 | 8.2 | 504 |
| August | ..... | 2.2 | .1 | .4 | 25 |
| September | ..... | .6 | .1 | .2 | 12 |
| Water year 1933-34 | ..... | ..... | ..... | ..... | ..... |
| **1934-35** | | | | | |
| October | 13 | 1.6 | 0 | .4 | 26 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 14-30 | 1,109.4 | 131 | 46.2 | 65 | 2,200 |
| May | 1,177.2 | 45 | 32.5 | 38 | 2,330 |
| June | 994.6 | 39.8 | 23.4 | 33.2 | 1,970 |
| July | 882.5 | 45.6 | 16.8 | 28.5 | 1,750 |
| August | 970.2 | 110 | 16.3 | 31.3 | 1,920 |
| September | 492.6 | 22.1 | 12.6 | 16.4 | 977 |
| Water year 1934-35 | ..... | ..... | ..... | ..... | ..... |
| **1935-36** | | | | | |
| October | 373 | 14.2 | 8 | 12 | 740 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 16-30 | 6,998 | 634 | 431 | 467 | 13,880 |
| May | 10,781 | 456 | 217 | 348 | 21,380 |
| June | 4,563 | 290 | 81 | 152 | 9,050 |
| July | 1,281.6 | 78 | 22.3 | 41.3 | 2,540 |
| August | 495.5 | 21.4 | 9.4 | 16 | 983 |
| September | 600.2 | 24.1 | 16.5 | 20 | 1,190 |
| Water year 1935-36 | ..... | ..... | ..... | ..... | ..... |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1936-37** | | | | | |
| October | 515.4 | 19.7 | 12.9 | 16.6 | 1,020 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 17-30 | 653.2 | 68 | 34.5 | 46.7 | 1,300 |
| May | 861.3 | 35 | 21.3 | 27.8 | 1,710 |
| June | 761.5 | 53 | 6.8 | 25.4 | 1,510 |
| July | 110.8 | 7.6 | .4 | 3.6 | 220 |
| August | 26.5 | 11.4 | 0 | .9 | 53 |
| September | 1.9 | .2 | 0 | .1 | 3.8 |
| Water year 1936-37 | ..... | ..... | ..... | ..... | ..... |
| **1937-38** | | | | | |
| October | 7.4 | .3 | .1 | .2 | 15 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 22-31 | 1,393 | 223 | 101 | 139 | 2,760 |
| April | 2,420 | 109 | 71 | 81 | 4,800 |
| May | 1,868.6 | 72 | 45.4 | 60 | 3,710 |
| June | 656.5 | 44.8 | 6 | 21.9 | 1,300 |
| July | 162.7 | 7.9 | 4 | 5.2 | 323 |
| August | 58.3 | 6 | .1 | 1.9 | 116 |
| September | 3 | ..... | ..... | .1 | 6 |
| Water year 1937-38 | ..... | ..... | ..... | ..... | ..... |
| **1938-39** | | | | | |
| October | 14.7 | .7 | .2 | .5 | 29 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 41.3 | 9 | 0 | 4.1 | 82 |
| April | 319.7 | 21.5 | 3.2 | 10.7 | 634 |
| May | 123.3 | 8.6 | 2.2 | 4 | 245 |
| June | 37.7 | 2.2 | .5 | 1.3 | 75 |
| July | 5.4 | .5 | 0 | .2 | 11 |
| August | 0 | 0 | 0 | 0 | 0 |
| September | 0 | 0 | 0 | 0 | 0 |
| Water year 1938-39 | ..... | ..... | ..... | ..... | ..... |
| **1939-40** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 20-30 | 431.6 | 150 | 8.6 | 39.2 | 856 |
| May | 108.3 | 8.6 | 1.4 | 3.5 | 215 |
| June | 14 | 1.3 | 0 | .5 | 28 |
| July | 1.8 | .3 | 0 | .1 | 3.6 |
| August | 106.9 | 12.9 | .5 | 3.4 | 212 |
| September | 7.6 | .4 | .1 | .3 | 15 |
| Water year 1939-40 | 670.2 | ..... | ..... | ..... | 1,330 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1940-41** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 14,456 | 1,530 | 0 | 482 | 28,670 |
| May | 8,235 | 400 | 149 | 266 | 16,330 |
| June | 2,530.4 | 145 | 34.4 | 84.3 | 5,020 |
| July | 745.1 | 30.8 | 20.6 | 24 | 1,480 |
| August | 769.6 | 26 | 21.5 | 24.8 | 1,530 |
| September | 1,113.5 | 52 | 25.5 | 37.1 | 2,210 |
| **Water year 1940-41** | ..... | ..... | ..... | ..... | **55,240** |
| **1941-42** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 1,600 | 300 | 1,020 | 60,810 |
| May | ..... | 1,030 | 378 | 646 | 39,720 |
| June | ..... | 361 | 122 | 208 | 12,390 |
| July | ..... | 113 | 40 | 60 | 3,720 |
| August | ..... | 71 | 43 | 48 | 2,950 |
| September | ..... | 47.2 | 35.2 | 40.7 | 2,420 |
| Water year 1941-42 | ..... | ..... | ..... | ..... | ..... |
| **1942-43** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 500 | 50 | 293 | 17,420 |
| May | ..... | 263 | 154 | 214 | 13,170 |
| June | ..... | 148 | 63 | 112 | 6,670 |
| July | ..... | 17.7 | 33.8 | 98 | 6,020 |
| August | ..... | 247 | 134 | 205 | 12,600 |
| September | ..... | 189 | 129 | 160 | 9,530 |
| Water year 1942-43 | ..... | ..... | ..... | ..... | ..... |
| **1943-44** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 201 | 2 | 113 | 6,740 |
| May | ..... | 248 | 125 | 156 | 9,570 |
| June | ..... | 294 | 142 | 181 | 10,750 |
| July | ..... | 1,110 | 290 | 747 | 45,950 |
| August | ..... | 957 | 396 | 610 | 37,530 |
| September | ..... | 436 | 208 | 311 | 18,520 |
| Water year 1943-44 | ..... | ..... | ..... | ..... | ..... |

## PEMBINA RIVER AT WALHALLA, NORTH DAKOTA

Location: Lat. 48°53'32", long. 97°59'09", in SE¼SW¼ sec. 35, T.163 N., R. 57W. 1½ miles downstream from Little Pembina River and 3½ miles southwest of Walhalla.

Drainage Area: 3,020 square miles.

Records available: October 1939 to September 1944.

Extremes: Maximum discharge 4,200 second-feet April 5, 1942.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1939-40** | | | | | |
| October | 1.3 | .1 | 0 | .04 | 2.6 |
| November | 4.7 | .6 | 0 | .16 | 9.3 |
| December | .7 | .1 | 0 | .02 | 1.4 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 2,635.8 | 766 | 0 | 87.9 | 5,230 |
| May | 584.3 | 44 | 7.9 | 18.8 | 1,160 |
| June | 85 | 9.7 | 0 | 2.83 | 169 |
| July | 22.8 | 22 | 0 | .74 | 45 |
| August | 242.8 | 46 | 0 | 7.83 | 482 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1939-40 | 3,577.4 | 766 | 0 | 9.77 | 7,099.3 |
| **1940-41** | | | | | |
| October | 3.3 | .6 | 0 | .11 | 6.5 |
| November | 4.4 | .4 | 0 | .15 | 8.7 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 1.4 | .8 | 0 | .05 | 2.8 |
| April | 30,194.6 | 3,200 | 1 | 1,006 | 59,890 |
| May | 10,746 | 501 | 185 | 347 | 21,310 |
| June | 4,295 | 225 | 73 | 143 | 8,520 |
| July | 1,210 | 96 | 23 | 39 | 2,400 |
| August | 667 | 25 | 20 | 21.5 | 1,320 |
| September | 4,299.7 | 931 | 22 | 143 | 8,530 |
| Water year 1940-41 | 51,420.7 | 3,200 | 0 | 141 | 102,000 |
| **1941-42** | | | | | |
| October | 3,070 | 301 | 44 | 99 | 6,090 |
| November | 1,080 | 60 | 13 | 36 | 2,140 |
| December | 432.9 | 26 | 34 | 14 | 859 |
| January | 62 | ..... | ..... | 2 | 123 |
| February | 196 | ..... | ..... | .7 | 39 |
| March | 2,015.5 | 420 | ..... | 65 | 4,000 |
| April | 55,240 | 4,200 | 150 | 1,841 | 109,600 |
| May | 28,602 | 1,350 | 600 | 923 | 56,730 |
| June | 8,843 | 561 | 185 | 295 | 17,540 |
| July | 3,179 | 173 | 70 | 103 | 6,310 |
| August | 2,992 | 447 | 50 | 96.5 | 5,930 |
| September | 1,666 | 107 | 46 | 55.5 | 3,330 |
| Water year 1941-42 | 107,202 | 4,200 | ..... | 294 | 212,700 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre Feet |
|---|---|---|---|---|---|
| **1942-43** | | | | | |
| October | 1,303 | 46 | 37 | 42 | 2,580 |
| November | 888 | 40 | 20 | 29.6 | 1,760 |
| December | 266 | 18 | ..... | 8.58 | 528 |
| January | 148.5 | ..... | ..... | 4.79 | 295 |
| February | 140 | ..... | ..... | 5 | 278 |
| March | 4,650 | 900 | ..... | 150 | 9,220 |
| April | 16,302 | 1,000 | 308 | 543 | 32,330 |
| May | 8,820 | 346 | 225 | 285 | 17,490 |
| June | 8,754 | 950 | 136 | 292 | 17,360 |
| July | 6,622 | 800 | 110 | 214 | 13,130 |
| August | 6,300 | 230 | 154 | 203 | 12,500 |
| September | 5,241 | 239 | 137 | 175 | 10,400 |
| Water year 1942-43 | 59,434.5 | 1,000 | ..... | 163 | 117,900 |
| **1943-44** | | | | | |
| October | 3,575 | 137 | 86 | 115 | 7,090 |
| November | 2,072 | 95 | 55 | 69.1 | 4,110 |
| December | 864.5 | 55 | 9 | 27.9 | 1,710 |
| January | 124.9 | 13 | 1.2 | 4.03 | 248 |
| February | 113.2 | 6.5 | 2.6 | 3.9 | 225 |
| March | 126.3 | 7.5 | 2.2 | 4.07 | 251 |
| April | 7,959.4 | 800 | 2 | 265 | 15,790 |
| May | 6,197 | 466 | 159 | 200 | 12,290 |
| June | 7,425 | 353 | 198 | 248 | 14,730 |
| July | 19,666 | 1,070 | 269 | 634 | 39,010 |
| August | 24,338 | 1,190 | 485 | 785 | 48,270 |
| September | 12,956 | 872 | 254 | 432 | 25,700 |
| Water year 1943-44 | 85,417.3 | 1,190 | 1.2 | 233 | 169,400 |

## PEMBINA RIVER AT NECHE, NORTH DAKOTA

Location: Sixty feet above concrete dam, lat. 48°58′, long. 97°33′ in Sec. 31, Twp. 164 North, Range 53 West in Neche.

Drainage area: 3,080 square miles.

Records available: May 1903 to September 1915, April 1919 to September 1943.

Extremes: Maximum discharge observed, 3,870 second feet May 2, 1904.

1903 Flood

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1902-03** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | ..... | ..... | ..... | ..... |
| May | ..... | ..... | ..... | 202 | 12,420 |
| June | ..... | 198 | 110 | 149 | 8,866 |
| July | ..... | 110 | 35 | 60 | 3,689 |
| August 1-8 | ..... | ..... | ..... | 35 | 555 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1902-03 | ..... | ..... | ..... | ..... | 25,530 |
| **1903-04** | | | | | |
| October 11-31 | ..... | ..... | ..... | 42 | 1,749 |
| November 1-14 | ..... | ..... | ..... | 42 | 1,156 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 8-30 | ..... | 3,580 | 217 | 1,920 | 87,600 |
| May | ..... | 3,870 | 1,420 | 2,640 | 162,000 |
| June | ..... | 2,530 | 926 | 1,690 | 101,000 |
| July | ..... | 2,690 | 399 | 839 | 51,600 |
| August | ..... | 420 | 315 | 385 | 23,700 |
| September | ..... | 315 | 236 | 302 | 18,000 |
| Water year 1903-04 | ..... | ..... | ..... | ..... | 446,805 |
| **1904-05** | | | | | |
| October | ..... | 275 | 217 | 235 | 14,400 |
| November 1-26 | ..... | 217 | 131 | 183 | 9,440 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 23-31 | ..... | 672 | 530 | 606 | 10,820 |
| April | ..... | 1,372 | 311 | 549 | 18,510 |
| May | ..... | 1,180 | 218 | 447 | 27,480 |
| June | ..... | 1,180 | 279 | 485 | 16,600 |
| July | ..... | 399 | 119 | 206 | 12,670 |
| August | ..... | 137 | 60 | 97 | 5,964 |
| September | ..... | 119 | 65 | 93.9 | 5,587 |
| Water year 1904-05 | ..... | ..... | ..... | ..... | 121,471 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1905-06** | | | | | |
| October | ..... | 150 | 70 | 119 | 7,317 |
| November 1-26 | ..... | 137 | 91 | 116 | 5,982 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 1,220 | 193 | 479 | 28,500 |
| May | ..... | 231 | 175 | 193 | 11,900 |
| June | ..... | 340 | 193 | 271 | 16,100 |
| July | ..... | 270 | 119 | 175 | 10,800 |
| August | ..... | 143 | 119 | 131 | 8,060 |
| September | ..... | 166 | 136 | 147 | 8,750 |
| Water year 1905-06 | ..... | ..... | ..... | ..... | 97,409 |
| **1906-07** | | | | | |
| October | ..... | 150 | 136 | 144 | 8,850 |
| November 1-19 | ..... | 136 | 82 | 111 | 4,180 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 21-30 | ..... | ..... | ..... | 860 | 17,100 |
| May | ..... | 2,190 | 826 | 1,600 | 98,400 |
| June | ..... | 805 | 263 | 507 | 30,200 |
| July | ..... | 272 | 76 | 156 | 9,590 |
| August | ..... | 80 | 36 | 54.3 | 3,340 |
| September | ..... | 47 | 23 | 34.8 | 2,070 |
| Water year 1906-07 | ..... | ..... | ..... | ..... | 173,730 |
| **1907-08** | | | | | |
| October | ..... | 66 | 36 | 55.2 | 3,390 |
| November | ..... | ..... | ..... | 38.0 | 2,260 |
| December | ..... | ..... | ..... | 19.0 | 1,170 |
| January | ..... | ..... | ..... | 6 | 369 |
| February | ..... | ..... | ..... | 3 | 173 |
| March | ..... | ..... | ..... | 3 | 184 |
| April | ..... | 927 | ..... | 375 | 22,300 |
| May | ..... | 591 | 310 | 474 | 29,100 |
| June | ..... | 486 | 136 | 224 | 13,300 |
| July | ..... | 136 | 36 | 87.8 | 5,400 |
| August | ..... | 66 | 36 | 52.1 | 3,200 |
| September | ..... | 78 | 55 | 60.9 | 3,620 |
| Water year 1907-08 | ..... | ..... | ..... | ..... | 84,466 |
| **1908-09** | | | | | |
| October 1-10 | ..... | 55 | 45 | 49.0 | 972 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | ..... | ..... | ..... | ..... |
| May | ..... | ..... | ..... | ..... | ..... |
| June—13 days | ..... | 654 | 268 | 427 | 11,000 |
| July 7-31 | ..... | 164 | 73 | 113 | 5,600 |
| August | ..... | 100 | 22 | 48.3 | 2,970 |
| September | ..... | 32 | 22 | 27.7 | 1,650 |
| Water year 1908-09 | ..... | ..... | ..... | ..... | 22,192 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1909-10** | | | | | |
| October | ..... | 73 | 32 | 45.9 | 2,970 |
| November 1-14 | ..... | 67 | 38 | 51.9 | 1,440 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 15-31 | ..... | 685 | 115 | 349 | 11,800 |
| April | ..... | 250 | 147 | 166 | 9,880 |
| May | ..... | 164 | 86 | 120 | 7,380 |
| June | ..... | 100 | 7 | 60.4 | 3,590 |
| July | ..... | 100 | 10 | 34.9 | 2,150 |
| August | ..... | 10 | 3 | 6.87 | 422 |
| September | ..... | 7 | 3 | 3.93 | 234 |
| Water year 1909-10 | ..... | ..... | ..... | ..... | 39,866 |
| **1910-11** | | | | | |
| October | ..... | 10 | 3 | 6.39 | 393 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 23-31 | ..... | 900 | 450 | 641 | 11,400 |
| April | ..... | 420 | 181 | 294 | 17,500 |
| May | ..... | 520 | 133 | 231 | 14,200 |
| June | ..... | 198 | 118 | 154 | 9,160 |
| July | ..... | 110 | 15 | 49.2 | 3,030 |
| August | ..... | 35 | 11 | 24.1 | 1,480 |
| September | ..... | 17 | 1 | 5.7 | 339 |
| Water year 1910-11 | ..... | ..... | ..... | ..... | 57,502 |
| **1911-12** | | | | | |
| October | ..... | 35 | 2 | 19.6 | 1,210 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 27-31 | ..... | 100 | 80 | 94.0 | 932 |
| April | ..... | 195 | 130 | 158 | 9,400 |
| May | ..... | 330 | 130 | 174 | 10,700 |
| June | ..... | 288 | 71 | 148 | 8,810 |
| July | ..... | 870 | 53 | 129 | 7,930 |
| August | ..... | 274 | 10 | 85.5 | 5,260 |
| September | ..... | 330 | 10 | 181 | 10,800 |
| Water year 1911-12 | ..... | ..... | ..... | ..... | 55,042 |
| **1912-13** | | | | | |
| October | ..... | 221 | 150 | 191 | 11,700 |
| November 1-23 | ..... | 300 | 150 | 202 | 9,220 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 3,850 | ..... | 1,670 | 99,400 |
| May | ..... | 850 | 330 | 529 | 32,600 |
| June | ..... | 330 | 49 | 191 | 11,400 |
| July | ..... | 159 | 66 | 106 | 6,520 |
| August | ..... | 84 | 66 | 69.5 | 4,270 |
| September | ..... | 66 | 57 | 61.8 | 3,680 |
| Water year 1912-1913 | ..... | 3,850 | 49 | 380.3 | 178,790 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1913-14** | | | | | |
| October | ..... | 75 | 49 | 63.6 | 3,910 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | ..... | ..... | 254 | 15,100 |
| May | ..... | 241 | 160 | 195 | 12,000 |
| June | ..... | 160 | 87 | 126 | 7,500 |
| July | ..... | 87 | 22 | 48.4 | 2,980 |
| August | ..... | 22 | 6 | 13.4 | 824 |
| September | ..... | 22 | 6 | 12.9 | 768 |
| Water year 1913-14 | ..... | 241 | 6 | 101.5 | 43,082 |
| **1914-15** | | | | | |
| October | ..... | 38 | 17 | 31.7 | 1,950 |
| November | ..... | 29 | ..... | 21.1 | 1,260 |
| December | ..... | ..... | ..... | 9 | 553 |
| January | ..... | ..... | ..... | 6 | 369 |
| February | ..... | ..... | ..... | 5 | 278 |
| March | ..... | ..... | ..... | 9 | 553 |
| April | ..... | 154 | 25 | 45.7 | 2,720 |
| May | ..... | 29 | 25 | 25.3 | 1,560 |
| June | ..... | 29 | 22 | 24.6 | 1,470 |
| July | ..... | 22 | 16 | 20.3 | 1,250 |
| August | ..... | 16 | 5 | 8.7 | 535 |
| September | ..... | 22 | 9 | 11.9 | 708 |
| Water year 1914-15 | ..... | 154 | 5 | 18.2 | 13,206 |

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No record 1916-18

| | | | | | |
|---|---|---|---|---|---|
| **1918-19** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 2,430 | 4 | 821 | 48,900 |
| May | ..... | 469 | 290 | 377 | 23,200 |
| June | ..... | 290 | 110 | 164 | 9,760 |
| July | ..... | 110 | 41 | 87.0 | 5,350 |
| August | ..... | 41 | 27 | 29.7 | 1,830 |
| September | ..... | 74 | 18 | 34.4 | 2,050 |
| Water year 1918-19 | ..... | 2,430 | 4 | 251 | 91,090 |
| **1919-20** | | | | | |
| October | ..... | 92 | 74 | 88.5 | 5,440 |
| November | ..... | ..... | ..... | 65.0 | 3,870 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | 300 | ..... | 28.0 | 1,720 |
| April | ..... | 361 | 50 | 178 | 10,600 |
| May | ..... | 280 | 201 | 228 | 14,000 |
| June | ..... | 182 | 95 | 149 | 8,870 |
| July | ..... | 95 | 38 | 76.7 | 4,720 |
| August | ..... | 38 | 10 | 17.6 | 1,080 |
| September | ..... | 50 | 10 | 18.3 | 1,090 |
| Water year 1919-20 | ..... | 361 | 10 | 94.2 | 51,390 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1920-21** | | | | | |
| October | ..... | 146 | 50 | 127 | 7,810 |
| November | ..... | ..... | ..... | 95 | 5,650 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | 112 | ..... | 50 | 3,070 |
| April | ..... | 733 | 129 | 358 | 21,300 |
| May | ..... | 260 | 129 | 169 | 10,400 |
| June | ..... | 146 | 77 | 96.6 | 5,750 |
| July | ..... | 335 | 35 | 113 | 6,950 |
| August | ..... | 35 | 9 | 18.8 | 1,160 |
| September | ..... | 47 | 4.5 | 16.2 | 964 |
| Water year 1920-21 | ..... | 733 | 4.5 | 115.6 | 63,054 |
| **1921-22** | | | | | |
| October | ..... | 146 | 62 | 106 | 6,520 |
| November | ..... | ..... | ..... | 53.6 | 3,190 |
| December | ..... | ..... | ..... | 30 | 1,840 |
| January | ..... | ..... | ..... | 8 | 492 |
| February | ..... | ..... | ..... | 4.5 | 250 |
| March | ..... | 146 | ..... | 40.9 | 2,510 |
| April | ..... | 1,300 | 77 | 450 | 26,800 |
| May | ..... | 733 | 165 | 243 | 14,900 |
| June | ..... | 165 | 77 | 140 | 8,330 |
| July | ..... | 62 | 18 | 26.5 | 1,630 |
| August | ..... | 18 | 5 | 9.4 | 578 |
| September | ..... | 77 | 5 | 38.5 | 2,290 |
| Water year 1921-22 | ..... | 1,300 | 5 | 95.7 | 69,330 |
| **1922-23** | | | | | |
| October | ..... | 79 | 46 | 68.0 | 4,180 |
| November | ..... | 79 | 65 | 73.9 | 4,400 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 3,120 | 17 | 1,150 | 68,400 |
| May | ..... | 1,470 | 181 | 1,130 | 69,500 |
| June | ..... | 711 | 121 | 315 | 18,700 |
| July | ..... | 121 | 73 | 86.3 | 5,310 |
| August | ..... | 104 | 73 | 89.2 | 5,480 |
| September | ..... | 121 | 88 | 104 | 6,190 |
| Water year 1922-23 | ..... | 3,120 | 17 | 376.4 | 182,160 |
| **1923-24** | | | | | |
| October | ..... | 121 | 104 | 114 | 7,010 |
| November | ..... | 104 | 63 | 90.3 | 5,370 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 27-31 | ..... | 30 | 13 | 24.6 | 244 |
| April | ..... | 674 | 30 | 220 | 13,100 |
| May | ..... | 259 | 117 | 157 | 9,650 |
| June | ..... | 117 | 84 | 98.5 | 5,860 |
| July | ..... | 84 | 30 | 50.0 | 3,320 |
| August | ..... | 30 | 8 | 14.4 | 885 |
| September | ..... | 100 | 3 | 20.5 | 1,220 |
| Water year 1923-24 | ..... | 674 | 3 | 94.5 | 46,659 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1924-25** | | | | | |
| October | ..... | 194 | 100 | 169 | 10,400 |
| November | ..... | 174 | ..... | 106 | 6,310 |
| December | ..... | ..... | ..... | 20 | 1,230 |
| January | ..... | ..... | ..... | 2 | 123 |
| February | ..... | ..... | ..... | 2 | 111 |
| March | ..... | 2,350 | ..... | 385 | 23,700 |
| April | ..... | 960 | 257 | 420 | 25,000 |
| May | ..... | 257 | 144 | 197 | 12,100 |
| June | ..... | 400 | 144 | 253 | 15,100 |
| July | ..... | 257 | 43 | 114 | 7,010 |
| August | ..... | 43 | 4 | 19 | 1,170 |
| September | ..... | 102 | 28 | 55.1 | 3,280 |
| Water year 1924-25 | ..... | 2,350 | 4 | 146 | 105,534 |
| **1925-26** | | | | | |
| October | ..... | 188 | 102 | 143 | 8,790 |
| November | ..... | 123 | ..... | 67 | 3,990 |
| December | ..... | ..... | ..... | 25 | 1,540 |
| January | ..... | ..... | ..... | 12 | 738 |
| February | ..... | ..... | ..... | 3 | 167 |
| March | ..... | 280 | ..... | 58.5 | 3,600 |
| April | ..... | 191 | 110 | 145 | 8,630 |
| May | ..... | 110 | 82 | 101 | 6,210 |
| June | ..... | 208 | 48 | 96 | 5,710 |
| July | ..... | 318 | 18 | 93 | 5,720 |
| August | ..... | 18 | 13 | 13.3 | 818 |
| September | ..... | 141 | 13 | 47.6 | 2,830 |
| Water year 1925-26 | ..... | 318 | ..... | 67.3 | 48,743 |
| **1926-27** | | | | | |
| October | ..... | 69 | 48 | 58.5 | 3,600 |
| November | ..... | ..... | ..... | 43 | 2,560 |
| December | ..... | ..... | ..... | 31 | 1,910 |
| January | ..... | ..... | ..... | 15 | 922 |
| February | ..... | ..... | ..... | 4 | 220 |
| March | ..... | ..... | ..... | 281 | 17,300 |
| April | ..... | 2,060 | 157 | 1,050 | 62,500 |
| May | ..... | 3,050 | 542 | 1,160 | 71,300 |
| June | ..... | 806 | 396 | 570 | 33,900 |
| July | ..... | 542 | 208 | 303 | 18,600 |
| August | ..... | 226 | 141 | 190 | 11,700 |
| September | ..... | 229 | 208 | 273 | 16,200 |
| Water year 1926-27 | ..... | 3,050 | ..... | 332 | 240,712 |
| **1927-28** | | | | | |
| October | ..... | 292 | 156 | 230 | 14,100 |
| November | ..... | 172 | ..... | 123 | 7,320 |
| December | ..... | ..... | ..... | 50 | 3,070 |
| January | ..... | ..... | ..... | 40 | 2,460 |
| February | ..... | ..... | ..... | 25 | 1,440 |
| March | ..... | 1,270 | ..... | 323 | 19,900 |
| April | ..... | 674 | 222 | 357 | 21,200 |
| May | ..... | 328 | 95 | 209 | 12,900 |
| June | ..... | 292 | 109 | 181 | 10,800 |
| July | ..... | 328 | 95 | 152 | 9,350 |
| August | ..... | 95 | 40 | 59.4 | 3,650 |
| September | ..... | 109 | 40 | 71.6 | 4,260 |
| Water year 1927-28 | ..... | 1,270 | ..... | 152 | 110,450 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1928-29** | | | | | |
| October | ..... | 132 | 114 | 122 | 7,500 |
| November | ..... | 97 | ..... | 44.8 | 2,670 |
| December | ..... | ..... | ..... | 22.4 | 1,380 |
| January | ..... | ..... | ..... | 12.0 | 738 |
| February | ..... | ..... | ..... | 8.0 | 444 |
| March | ..... | 750 | ..... | 183 | 11,300 |
| April | ..... | 350 | 132 | 220 | 13,100 |
| May | ..... | 132 | 97 | 110 | 6,760 |
| June | ..... | 114 | 30 | 79.4 | 4,720 |
| July | ..... | 25 | 1.0 | 6.21 | 382 |
| August | ..... | 5.5 | 2.5 | 3.86 | 237 |
| September | ..... | 12 | 1.5 | 4.77 | 284 |
| Water year 1928-29 | ..... | 750 | 1.0 | 68.3 | 49,515 |
| **1929-30** | | | | | |
| October | ..... | 47 | 25 | 19.0 | 1,170 |
| November | ..... | 63 | ..... | 45.8 | 2,730 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 2,900 | 1 | 928 | 55.200 |
| May | ..... | 530 | 294 | 458 | 28,200 |
| June | ..... | 294 | 168 | 216 | 12,900 |
| July | ..... | 330 | 5.5 | 85.7 | 5,270 |
| August | ..... | ..... | 2.5 | 15.9 | 978 |
| September | ..... | 28 | 2.5 | 11.9 | 708 |
| Water year 1929-30 | ..... | 2,900 | 1 | 221.4 | 107,156 |
| **1930-31** | | | | | |
| October | ..... | 28 | 21 | 25.8 | 1,590 |
| November | ..... | 22 | 3.0 | 11.2 | 666 |
| December | ..... | ..... | ..... | 2.75 | 169 |
| January | ..... | ..... | ..... | 7.17 | 441 |
| February | ..... | ..... | ..... | 6.56 | 364 |
| March | ..... | 291 | 6 | 45.2 | 2,780 |
| April | ..... | 1,490 | 112 | 463 | 27,600 |
| May | ..... | 145 | 46 | 103 | 6,330 |
| June | ..... | 46 | 8.0 | 22.3 | 1,330 |
| July | ..... | 21 | 5.0 | 10.8 | 664 |
| August | ..... | 20 | .5 | 2.07 | 127 |
| September | ..... | .5 | .2 | 0.39 | 23 |
| Water year 1930-31 | ..... | 1,490 | .2 | 58.0 | 42,084 |
| **1931-32** | | | | | |
| October | ..... | 3.0 | 0.2 | 0.64 | 39 |
| November | ..... | 8.0 | 2.6 | 4.92 | 293 |
| December | ..... | 2.5 | .2 | 1.04 | 64 |
| January | ..... | ..... | ..... | .13 | 8 |
| February | ..... | ..... | 0 | 3.4 | 196 |
| March | ..... | ..... | ..... | 14.1 | 867 |
| April | ..... | 1.170 | 57 | 423 | 25,200 |
| May | ..... | 262 | 114 | 186 | 11,400 |
| June | ..... | 114 | 36 | 71.2 | 4,240 |
| July | ..... | 32 | 8.4 | 21.1 | 1,300 |
| August | ..... | 14 | 1.6 | 6.10 | 375 |
| September | ..... | 7.8 | .3 | 1.84 | 109 |
| Water year 1931-32 | ..... | 1,170 | 0 | 60.7 | 44,091 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1932-33** | | | | | |
| October | ..... | 29 | 0.1 | 7.53 | 463 |
| November | ..... | 15 | 2.8 | 8.02 | 477 |
| December | ..... | ..... | ..... | 2.71 | 167 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | 496 | 0 | 17.9 | 1,100 |
| April | ..... | 1,100 | 516 | 721 | 42,900 |
| May | ..... | 1,420 | 385 | 573 | 35,200 |
| June | ..... | 686 | 138 | 320 | 19,000 |
| July | ..... | 140 | 41 | 74.5 | 4,580 |
| August | ..... | 38 | 19 | 27.2 | 1,670 |
| September | ..... | 41 | 18 | 28.9 | 1,720 |
| Water year 1932-33 | ..... | 1,420 | 0 | 148 | 107,277 |
| **1933-34** | | | | | |
| October | ..... | 55 | 34 | 47.2 | 2,810 |
| November | ..... | 38 | 17 | 24.1 | 1,440 |
| December | ..... | 15 | 5.3 | 9.60 | 590 |
| January | ..... | 5.1 | 4.6 | 4.74 | 292 |
| February | ..... | 5.4 | 4.4 | 4.81 | 267 |
| March | ..... | 188 | 4.6 | 75.2 | 4,630 |
| April | ..... | 780 | 74 | 343 | 20,430 |
| May | ..... | 224 | 91 | 154 | 9,440 |
| June | ..... | 88 | 41 | 67.7 | 4,030 |
| July | ..... | 40 | 4.6 | 19.9 | 1,220 |
| August | ..... | 3.5 | .4 | 1.37 | 84 |
| September | ..... | .6 | 0 | .10 | 6.0 |
| Water year 1933-34 | ..... | 780 | 0 | 62.6 | 45,239 |
| **1934-35** | | | | | |
| October | 52.1 | 16 | 0 | 1.68 | 103 |
| November | 32.0 | 2.0 | .7 | 1.07 | 63 |
| December | 2.6 | .7 | 0 | .08 | 5.2 |
| January | 0 | 0 | 0 | 0 | 0 |
| February | 0 | 0 | 0 | 0 | 0 |
| March | 391 | 130 | 0 | 12.6 | 776 |
| April | 4,324 | 342 | 63 | 144 | 8,580 |
| May | 1,990 | 78 | 44 | 64.2 | 3,950 |
| June | 3,245 | 364 | 53 | 108 | 6,440 |
| July | 1,934 | 116 | 22 | 62.4 | 3,840 |
| August | 729.1 | 51 | 7.4 | 23.5 | 1,450 |
| September | 445.9 | 24 | 9.0 | 14.9 | 884 |
| Water year 1934-35 | 13,145.7 | 364 | 0 | 36.0 | 26,091.2 |
| **1935-36** | | | | | |
| October | 433.9 | 17 | 9.9 | 14.0 | 861 |
| November | 150.4 | 8.6 | 3.0 | 5.01 | 298 |
| December | 68.0 | 3.8 | 1.0 | 2.19 | 135 |
| January | 17.6 | 1.0 | .1 | .57 | 35 |
| February | 1.1 | .2 | 0 | .04 | 2.2 |
| March | 0 | 0 | 0 | 0 | 0 |
| April | 20,439.8 | 2,530 | 0 | 681 | 40,540 |
| May | 13,280 | 516 | 328 | 428 | 26,340 |
| June | 5,896 | 315 | 95 | 197 | 11,690 |
| July | 1,766 | 93 | 33 | 57.0 | 3,500 |
| August | 641 | 31 | 16 | 20.7 | 1,270 |
| September | 760 | 58 | 16 | 25.3 | 1,510 |
| Water year 1935-36 | 43,453.8 | 2,530 | 0 | 119 | 86,181.2 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1936-37** | | | | | |
| October | 438.6 | 19 | 8.2 | 14.1 | 870 |
| November | 212.4 | 9.4 | 5.2 | 7.08 | 421 |
| December | 109.5 | 5.8 | 1.8 | 3.53 | 217 |
| January | 17.2 | 1.6 | 0 | .55 | 34 |
| February | 0 | 0 | 0 | 0 | 0 |
| March | 0 | 0 | 0 | 0 | 0 |
| April | 3,362 | 213 | 0 | 112 | 6,670 |
| May | 2,320 | 181 | 44 | 74.8 | 4,600 |
| June | 1,966 | 213 | 23 | 65.5 | 3,900 |
| July | 442.6 | 21 | 7.8 | 14.3 | 878 |
| August | 386.8 | 52 | .6 | 12.5 | 767 |
| September | 12.1 | 1.7 | .1 | .40 | 24 |
| Water year 1936-37 | 9,267.2 | 213 | 0 | 25.4 | 18,381 |
| **1937-38** | | | | | |
| October | 25.2 | 5.1 | 0.1 | 0.81 | 50 |
| November | 10.9 | .8 | .2 | .36 | 22 |
| December | 5.2 | .2 | .1 | .17 | 10 |
| January | 0 | 0 | 0 | 0 | 0 |
| February | 0 | 0 | 0 | 0 | 0 |
| March | 5,561 | 630 | 0 | 179 | 11,030 |
| April | 3,030 | 154 | 64 | 101 | 6,010 |
| May | 2,428 | 103 | 55 | 78.3 | 4,820 |
| June | 1,099 | 54 | 22 | 36.6 | 2,180 |
| July | 386.2 | 22 | .8 | 12.5 | 766 |
| August | 1.6 | .8 | 0 | .05 | 3.2 |
| September | 0 | 0 | 0 | 0 | 0 |
| Water year 1937-38 | 12,547.1 | 630 | 0 | 34.4 | 24,891.2 |
| **1938-39** | | | | | |
| October | 0 | 0 | 0 | 0 | 0 |
| November | 0 | 0 | 0 | 0 | 0 |
| December | 0 | 0 | 0 | 0 | 0 |
| January | 0 | 0 | 0 | 0 | 0 |
| February | 0 | 0 | 0 | 0 | 0 |
| March | 0 | 0 | 0 | 0 | 0 |
| April | 740 | 50 | 4 | 24.7 | 1,470 |
| May | 364.3 | 22 | 6.0 | 11.8 | 723 |
| June | 322.6 | 27 | 4.1 | 10.8 | 640 |
| July | 18.7 | 5.0 | 0 | .60 | 37 |
| August | 0 | 0 | 0 | 0 | 0 |
| September | 0 | 0 | 0 | 0 | 0 |
| Water year 1938-39 | 1,445.6 | 50 | 0 | 3.96 | 2,870 |
| **1939-40** | | | | | |
| October | 0 | 0 | 0 | 0 | 0 |
| November | 0 | 0 | 0 | 0 | 0 |
| December | 0 | 0 | 0 | 0 | 0 |
| January | 0 | 0 | 0 | 0 | 0 |
| February | 0 | 0 | 0 | 0 | 0 |
| March | 0 | 0 | 0 | 0 | 0 |
| April | 2,820 | 730 | 0 | 94.0 | 5,590 |
| May | 1,099 | 87 | 16 | 35.5 | 2,180 |
| June | 196.8 | 16 | 0 | 6.56 | 390 |
| July | 0 | 0 | 0 | 0 | 0 |
| August | 218.8 | 36 | 0 | 7.06 | 434 |
| September | 0 | 0 | 0 | 0 | 0 |
| Water year 1939-40 | 4,334.6 | 730 | 0 | 11.8 | 8,594 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1940-41** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 29,872.7 | 2,830 | ..... | 996 | 59,250 |
| May | 11,921 | 556 | 224 | 385 | 23,640 |
| June | 5,236 | 252 | 101 | 175 | 10,390 |
| July | 1,913 | 136 | 39 | 61.7 | 3,790 |
| August | 872 | 38 | 23 | 28.1 | 1,730 |
| September | 4,037 | 450 | 24 | 135 | 8,000 |
| Water year 1940-41 | 53,851.7 | 2,830 | ..... | 148 | 106,800 |
| **1941-42** | | | | | |
| October | 3,776 | 314 | 64 | 122 | 7,490 |
| November | 1,554 | 80 | 22 | 51.8 | 3,080 |
| December | 814 | 39 | 12 | 26.3 | 1,610 |
| January | 109.3 | 8.5 | 1.6 | 3.53 | 217 |
| February | 30.4 | 1.6 | .8 | 1.09 | 60 |
| March | 1,418.0 | 480 | 1.6 | 45.7 | 2 810 |
| April | 57,015 | 3,430 | 75 | 1,900 | 113,100 |
| May | 30,289 | 1,430 | 671 | 977 | 60,080 |
| June | 10,949 | 648 | 224 | 365 | 21,720 |
| July | 4,006 | 213 | 87 | 129 | 7,950 |
| August | 3,103 | 289 | 68 | 100 | 6,150 |
| September | 2,053 | 117 | 56 | 68.4 | 4,070 |
| Water year 1941-42 | 115,116.7 | 3,430 | .8 | 315 | 228,300 |
| **1942-43** | | | | | |
| October | 1,568 | 60 | 34 | 50.6 | 3,110 |
| November | 1,017 | 50 | 23 | 33.9 | 2,020 |
| December | 294.7 | 20 | 6.5 | 9.51 | 585 |
| January | 201.8 | 11 | ..... | 6.51 | 400 |
| February | 152.7 | 7.5 | ..... | 5.45 | 303 |
| March | 4,809.5 | 1,100 | 3.4 | 155 | 9,540 |
| April | 15,018 | 750 | 343 | 501 | 29,790 |
| May | 9,358 | 374 | 241 | 302 | 18,560 |
| June | 9,442 | 964 | 168 | 315 | 18,730 |
| July | 7,021 | 736 | 114 | 226 | 13,930 |
| August | 6,414 | 230 | ..... | 207 | 12,720 |
| September | 5,426 | 234 | 140 | 181 | 10,760 |
| Water year 1942-43 | 60,722.7 | 1,100 | 3.4 | 166 | 120,400 |
| **1943-44** | | | | | |
| October | 3,810 | 140 | 100 | 123 | 7,560 |
| November | 2,161 | 100 | 54 | 72 | 4,290 |
| December | 1,232 | 56 | 20 | 39.7 | 2,440 |
| January | 228.5 | 20 | 4.2 | 7.37 | 453 |
| February | 105.8 | 5 | 2.6 | 3.65 | 210 |
| March | 115.9 | 5.1 | 3.4 | 3.74 | 230 |
| April | 8,216.2 | 750 | 4.2 | 274 | 16,300 |
| May | 6,315 | 343 | 175 | 204 | 12,530 |
| June | 7,655 | 300 | 234 | 255 | 15,180 |
| July | 17,478 | 1,050 | 255 | 564 | 34,670 |
| August | 25,138 | 1,200 | 500 | 811 | 49,860 |
| September | 13,889 | 791 | 282 | 463 | 27,550 |
| Water year 1943-44 | 86,344.4 | 1,200 | 2.6 | 236 | 171,300 |

## RED RIVER AT EMERSON, MANITOBA

Location: Chain gage, lat. 49°00'30", long. 97°13'00", on Canadian National Railway's bridge in Emerson.

Drainage Area: 40,200 square miles (includes 3,940 square miles of closed Devils Lake Basin.)

Records Available: March to November 1902 and May 1912 to September 1944.

Average discharge: 31 years (1913-1944) 2,092 second-feet.

Extremes: Maximum daily discharge 46,200 second feet Apr. 24, 1916. Minimum observed .9 second foot, Feb. 6-8 1937

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1925-26 | | | | | |
| October | ..... | 1,320 | 629 | 936 | 57,549 |
| November | ..... | 990 | 755 | 889 | 52,897 |
| December | ..... | 740 | 532 | 657 | 40,396 |
| January | ..... | 525 | 446 | 467 | 28,714 |
| February | ..... | 562 | 494 | 519 | 28,823 |
| March | ..... | 7,800 | 569 | 1,690 | 103,910 |
| April | ..... | 8,000 | 1,980 | 5,220 | 310,601 |
| May | ..... | 1,830 | 901 | 1,340 | 82,391 |
| June | ..... | 6,940 | 1,310 | 2,570 | 152,720 |
| July | ..... | 6,310 | 593 | 2,110 | 129,734 |
| August | ..... | 901 | 257 | 486 | 29,882 |
| September | ..... | 576 | 237 | 452 | 26,895 |
| Water year 1925-26 | ..... | 8,000 | 237 | 1,445 | 1,044,712 |
| 1926-27 | | | | | |
| October | ..... | 1,130 | 523 | 973 | 59,825 |
| November | ..... | 1,100 | 524 | 816 | 48,554 |
| December | ..... | 542 | 454 | 493 | 30,312 |
| January | ..... | 460 | 371 | 416 | 25,578 |
| February | ..... | 413 | 366 | 391 | 21,714 |
| March | ..... | 7,740 | 414 | 2,010 | 123,586 |
| April | ..... | 16,500 | 8,240 | 13,100 | 779,476 |
| May | ..... | 20,500 | 7,540 | 14,700 | 903,835 |
| June | ..... | 16,200 | 5,300 | 8,720 | 518,858 |
| July | ..... | 5,040 | 2,130 | 3,310 | 203,517 |
| August | ..... | 2,100 | 1,310 | 1,590 | 97,762 |
| September | ..... | 1,580 | 1,390 | 1,480 | 88,063 |
| Water year 1926-27 | ..... | 20,500 | 366 | 4,010 | 2,901,080 |
| 1927-28 | | | | | |
| October | ..... | 1,470 | 1,310 | 1,370 | 84,235 |
| November | ..... | 1,400 | 765 | 1,100 | 65,452 |
| December | ..... | 973 | 605 | 804 | 49,434 |
| January | ..... | 632 | 578 | 603 | 37,076 |
| February | ..... | 712 | 634 | 671 | 38,595 |
| March | ..... | 8,800 | 715 | 1,670 | 102,681 |
| April | ..... | 16,800 | 2,990 | 7,580 | 451,025 |
| May | ..... | 3,380 | 2,250 | 2,850 | 175,234 |
| June | ..... | 6,100 | 1,960 | 3,300 | 196,357 |
| July | ..... | 5,750 | 3,110 | 4,530 | 278,529 |
| August | ..... | 2,940 | 1,380 | 1,920 | 118,052 |
| September | ..... | 2,960 | 1,780 | 2,420 | 143,995 |
| Water year 1927-28 | ..... | 16,800 | 578 | 2,400 | 1,740,665 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1928-29** | | | | | |
| October | ..... | 2,200 | 1,650 | 1,820 | 111,904 |
| November | ..... | 1,930 | 1,020 | 1,600 | 95,203 |
| December | ..... | 1,220 | 965 | 1,090 | 67,019 |
| January | ..... | 1,150 | 954 | 1,050 | 64,560 |
| February | ..... | 948 | 845 | 884 | 49,093 |
| March | ..... | 16,000 | 850 | 5,300 | 325,873 |
| April | ..... | 19,200 | 3,320 | 6,780 | 403,424 |
| May | ..... | 3,230 | 2,280 | 2,650 | 162,936 |
| June | ..... | 2,460 | 990 | 1,700 | 101,153 |
| July | ..... | 958 | 589 | 754 | 46,360 |
| August | ..... | 537 | 343 | 424 | 26,070 |
| September | ..... | 350 | 298 | 323 | 19,219 |
| Water year 1928-29 | ..... | 19,200 | 298 | 2,030 | 1,472,814 |
| **1929-30** | | | | | |
| October | ..... | 539 | 361 | 453 | 27,900 |
| November | ..... | 592 | 235 | 479 | 28,500 |
| December | ..... | 342 | 236 | 294 | 18,100 |
| January | ..... | 240 | 175 | 200 | 12,300 |
| February | ..... | 200 | 169 | 179 | 9,940 |
| March | ..... | 5,280 | 300 | 2,520 | 155,000 |
| April | ..... | 20,800 | 2,480 | 8,990 | 535,000 |
| May | ..... | 10,000 | 2,350 | 5,160 | 317,000 |
| June | ..... | 3,340 | 1,280 | 1,920 | 114,000 |
| July | ..... | 1,380 | 595 | 1,060 | 65,200 |
| August | ..... | 560 | 230 | 363 | 22,300 |
| September | ..... | 298 | 170 | 215 | 12,800 |
| Water year 1929-30 | ..... | 20,800 | 169 | 1,820 | 1,320,000 |
| **1930-31** | | | | | |
| October | ..... | 420 | 154 | 232 | 14,300 |
| November | ..... | 350 | 210 | 267 | 15,900 |
| December | ..... | 287 | 191 | 236 | 14,500 |
| January | ..... | 245 | 125 | 176 | 10,800 |
| February | ..... | 287 | 152 | 200 | 11,100 |
| March | ..... | 2,140 | 280 | 960 | 59,000 |
| April | ..... | 7,940 | 1,140 | 3,380 | 201,000 |
| May | ..... | 1,090 | 742 | 881 | 54,200 |
| June | ..... | 1,030 | 377 | 660 | 39,300 |
| July | ..... | 618 | 201 | 356 | 21,900 |
| August | ..... | 234 | 99 | 158 | 9,720 |
| September | ..... | 110 | 55 | 81 | 4,820 |
| Water year 1930-31 | ..... | 7,940 | 55 | 631 | 457,000 |
| **1931-32** | | | | | |
| October | ..... | 176 | 37 | 84.8 | 5,210 |
| November | ..... | 265 | 164 | 221 | 13,200 |
| December | ..... | 228 | 160 | 187 | 11,500 |
| January | ..... | 174 | 153 | 166 | 10,200 |
| February | ..... | 217 | 123 | 138 | 7,940 |
| March | ..... | 2,730 | 291 | 1,360 | 83,600 |
| April | ..... | 18,900 | 870 | 7,810 | 465,000 |
| May | ..... | 2,630 | 856 | 1,930 | 119,000 |
| June | ..... | 847 | 377 | 586 | 34,900 |
| July | ..... | 400 | 133 | 256 | 15,700 |
| August | ..... | 126 | 26 | 62.5 | 3,840 |
| September | ..... | 57 | 24 | 40 | 2,380 |
| Water year 1931-32 | ..... | 18,900 | 24 | 1,060 | 772,000 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre Feet |
|---|---|---|---|---|---|
| **1932-33** | | | | | |
| October | 1,428.4 | 78 | 25.4 | 46.1 | 2,830 |
| November | 3,641 | 143 | 80 | 121 | 7,200 |
| December | 2,760 | 115 | 62 | 89 | 5,470 |
| January | 1,675 | 62 | 44 | 54 | 3,320 |
| February | 1,381.7 | 73 | 42.7 | 49.3 | 2,740 |
| March | 34,402 | 3,200 | 75 | 1,110 | 68,300 |
| April | 175,180 | 11,000 | 2,600 | 5,840 | 348,000 |
| May | 47,980 | 2,330 | 1,110 | 1,550 | 95,300 |
| June | 30,780 | 2,110 | 424 | 1,030 | 61,300 |
| July | 7,855 | 409 | 133 | 253 | 15,600 |
| August | 2,265 | 120 | 39 | 73 | 4,490 |
| September | 1,378 | 72 | 25 | 45.9 | 2,730 |
| Water year 1932-33 | 310,726.1 | 1,100 | 25 | 851 | 617,000 |
| **1933-34** | | | | | |
| October | 1,512 | 70 | 37 | 48.8 | 3,000 |
| November | 2,545 | 115 | 59 | 85 | 5,060 |
| December | 1,432.6 | 78 | 26.9 | 46.2 | 2,840 |
| January | 1,682.9 | 70 | 29.6 | 54 | 3,320 |
| February | 912.9 | 47 | 23.8 | 32.6 | 1,810 |
| March | 15,246 | 1,240 | 50 | 492 | 30,300 |
| April | 65,343 | 4,800 | 560 | 2,180 | 130,000 |
| May | 20,541 | 1,130 | 296 | 663 | 40,800 |
| June | 5,883 | 290 | 126 | 196 | 11,700 |
| July | 4,285 | 196 | 92 | 138 | 8,490 |
| August | 1,445.8 | 83 | 22.7 | 46.6 | 2,870 |
| September | 712.6 | 29 | 20.4 | 23.8 | 1,420 |
| Water year 1933-34 | 121,541.8 | 4,800 | 20.4 | 333 | 242,000 |
| **1934-35** | | | | | |
| October | 1,459.2 | 98 | 20 | 47.1 | 2,890 |
| November | 2,317 | 97 | 56 | 77 | 4,600 |
| December | 1,292.2 | 63 | 15 | 41.7 | 2,560 |
| January | 437.2 | 17.1 | 12 | 14.1 | 867 |
| February | 754.7 | 36 | 18 | 27 | 1,500 |
| March | 23,219.9 | 5,390 | 28 | 749 | 46,060 |
| April | 99,750 | 5,470 | 1,620 | 3,330 | 197,900 |
| May | 36,366 | 1,720 | 698 | 1,170 | 72,130 |
| June | 13,146 | 638 | 274 | 438 | 26,080 |
| July | 33,545 | 1,750 | 397 | 1,080 | 66,540 |
| August | 15,936 | 1,200 | 297 | 514 | 31,610 |
| September | 8,062 | 483 | 142 | 269 | 15,990 |
| Water year 1934-35 | 236,285.2 | 5,470 | 12 | 647 | 468,700 |
| **1935-36** | | | | | |
| October | 3,622 | 142 | 102 | 117 | 7,180 |
| November | 2,334 | 110 | 57 | 78 | 4,630 |
| December | 1,834 | 64 | 55 | 59 | 3,640 |
| January | 1,760 | 64 | 48 | 57 | 3,490 |
| February | 1,565 | 64 | 45 | 54 | 3,100 |
| March | 1,805 | 72 | 48 | 58 | 3,580 |
| April | 202,165 | 18,000 | 63 | 6,740 | 401,000 |
| May | 80,670 | 5,590 | 1,310 | 2,600 | 160,000 |
| June | 17,498 | 1,180 | 200 | 583 | 34,710 |
| July | 3,738 | 180 | 81 | 121 | 7,410 |
| August | 2,457 | 97 | 70 | 79 | 4,870 |
| September | 2,005.6 | 114 | 29.2 | 67 | 3,980 |
| Water year 1935-36 | 321,453.6 | 18,000 | 29.2 | 878 | 637,600 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1936-37** | | | | | |
| October | 887.8 | 36.4 | 23.5 | 28.6 | 1,760 |
| November | 712.3 | 31 | 19 | 23.7 | 1,410 |
| December | 1,037.4 | 70 | 17 | 33.5 | 2,060 |
| January | 219.7 | 42.2 | 1.2 | 7.1 | 436 |
| February | 34 | 1.6 | .9 | 1.2 | 67 |
| March | 69.9 | 11 | 1.1 | 2.3 | 139 |
| April | 60,753 | 4,320 | 15 | 2,030 | 120,500 |
| May | 90,011 | 5,840 | 896 | 2,900 | 178,500 |
| June | 31,773 | 1,680 | 560 | 1,060 | 63,020 |
| July | 25,742 | 1,910 | 355 | 830 | 51,060 |
| August | 48,516 | 2,620 | 822 | 1,570 | 96,230 |
| September | 24,549 | 941 | 617 | 818 | 48,690 |
| Water year 1936-37 | 284,305.1 | 5,840 | .9 | 779 | 563,900 |
| **1937-38** | | | | | |
| October | 12,452 | 590 | 244 | 402 | 24,700 |
| November | 8,423 | 355 | 160 | 281 | 16,710 |
| December | 2,245.6 | 130 | 48 | 72 | 4,450 |
| January | 1,651.4 | 84 | 34 | 53 | 3,280 |
| February | 2,124 | 96 | 60 | 76 | 4,210 |
| March | 45,036 | 6,270 | 96 | 1,450 | 89,330 |
| April | 38,459 | 3,310 | 768 | 1,280 | 76,280 |
| May | 150,955 | 7,530 | 943 | 4,870 | 299,400 |
| June | 77,510 | 4,330 | 1,260 | 2,580 | 153,700 |
| July | 26,498 | 1,150 | 441 | 855 | 52,560 |
| August | 6,743 | 414 | 124 | 218 | 13,370 |
| September | 5,802 | 327 | 138 | 193 | 11,510 |
| Water year 1937-38 | 377,899 | 7,530 | 34 | 1,040 | 749,500 |
| **1938-39** | | | | | |
| October | 6,193 | 250 | 166 | 200 | 12,280 |
| November | 6,217 | 300 | 148 | 207 | 12,330 |
| December | 5,638 | 215 | 136 | 182 | 11,180 |
| January | 6,126 | 270 | 156 | 198 | 12,150 |
| February | 7,151 | 287 | 212 | 255 | 14,180 |
| March | 8,056 | 499 | 204 | 260 | 15,980 |
| April | 111,525 | 6,700 | 555 | 3,720 | 221,200 |
| May | 36,986 | 2,460 | 647 | 1,190 | 73,360 |
| June | 19,760 | 878 | 520 | 659 | 39,190 |
| July | 17,541 | 766 | 275 | 566 | 34,790 |
| August | 5,814 | 260 | 118 | 188 | 11,530 |
| September | 6,908 | 331 | 123 | 230 | 13,700 |
| Water year 1938-39 | 237,915 | 6,700 | 118 | 652 | 471,900 |
| **1939-40** | | | | | |
| October | 11,068 | 427 | 285 | 357 | 21,950 |
| November | 11,535 | 504 | 228 | 384 | 22,880 |
| December | 8,618 | 334 | 143 | 278 | 17,090 |
| January | 4,193 | 180 | 95 | 135 | 8,320 |
| February | 4,299 | 183 | 115 | 148 | 8,530 |
| March | 6,950 | 265 | 180 | 224 | 13,790 |
| April | 152,536 | 14,600 | 235 | 5,085 | 302,600 |
| May | 69,180 | 3,300 | 1,590 | 2,232 | 137,200 |
| June | 31,590 | 1,540 | 566 | 1,053 | 62,660 |
| July | 11,074 | 551 | 250 | 357 | 21,960 |
| August | 7,907 | 356 | 164 | 255 | 15,680 |
| September | 5,604 | 305 | 118 | 187 | 11,120 |
| Water year 1939-40 | 324,554 | 14,600 | 95 | 887 | 643,800 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre Feet |
|---|---|---|---|---|---|
| **1940-41** | | | | | |
| October | 7,318 | 305 | 188 | 236 | 14,520 |
| November | 11,772 | 506 | 270 | 392 | 23,350 |
| December | 9,175 | 347 | 250 | 296 | 18,200 |
| January | 9,672 | 362 | 265 | 312 | 19,180 |
| February | 9,743 | 362 | 334 | 348 | 19,320 |
| March | 11,213 | 426 | 303 | 362 | 22,240 |
| April | 409,451 | 27,800 | 416 | 13,600 | 812,100 |
| May | 96,710 | 5,260 | 1,480 | 3,120 | 191,800 |
| June | 158,530 | 10,900 | 1,230 | 5,280 | 314,400 |
| July | 44,213 | 3,140 | 592 | 1,430 | 87,700 |
| August | 23,416 | 1,320 | 320 | 755 | 46,440 |
| September | 55,593 | 4,650 | 616 | 1,850 | 110,300 |
| Water year 1940-41 | 846,806 | 27,800 | 188 | 2,320 | 1,680,000 |
| **1941-42** | | | | | |
| October | 95,020 | 4,920 | 1,740 | 3,070 | 188,500 |
| November | 41,670 | 1,730 | 1,050 | 1,390 | 82,650 |
| December | 27,514 | 1,210 | 707 | 888 | 54,570 |
| January | 17,519 | 711 | 472 | 565 | 34,750 |
| February | 17,784 | 665 | 588 | 635 | 35,270 |
| March | 60,832 | 8,280 | 616 | 1,960 | 120,700 |
| April | 495,950 | 27,900 | 5,800 | 16,500 | 983,700 |
| May | 277,960 | 14,000 | 5,360 | 8,970 | 551,300 |
| June | 125,610 | 5,170 | 2,370 | 4,190 | 249,100 |
| July | 56,090 | 2,300 | 1,480 | 1,810 | 111,300 |
| August | 38,886 | 1,870 | 950 | 1,250 | 77,130 |
| September | 93,310 | 4,810 | 1,480 | 3,110 | 185,100 |
| Water year 1941-42 | 1,348,145 | 27,900 | 472 | 3,690 | 2,674,000 |
| **1942-43** | | | | | |
| October | 50,930 | 2,160 | 1,290 | 1,640 | 101,000 |
| November | 34,041 | 1,370 | 743 | 1,130 | 67,520 |
| December | 24,024 | 866 | 694 | 775 | 47,650 |
| January | 24,728 | 834 | 740 | 798 | 49,050 |
| February | 19,591 | 754 | 582 | 700 | 38,860 |
| March | 37,416 | 6,400 | 589 | 1,210 | 74,210 |
| April | 693,990 | 29,500 | 6,590 | 23,100 | 1,377,000 |
| May | 225,010 | 13,500 | 5,560 | 7,260 | 446,300 |
| June | 373,230 | 16,200 | 7,790 | 12,400 | 740,300 |
| July | 201,400 | 9,090 | 3,280 | 6,500 | 399,500 |
| August | 80,110 | 3,750 | 1,920 | 2,580 | 158,900 |
| September | 54,530 | 2,080 | 1,550 | 1,820 | 108,200 |
| Water year 1942-43 | 1,819,000 | 29,500 | 582 | 4,980 | 3,608,490 |
| **1943-44** | | | | | |
| October | 45,650 | 1,590 | 1,380 | 1,470 | 90,550 |
| November | 42,950 | 1,730 | 1,240 | 1,430 | 85,190 |
| December | 28,709 | 1,220 | 657 | 926 | 56,940 |
| January | 20,540 | 702 | 627 | 663 | 40,740 |
| February | 21,347 | 780 | 687 | 736 | 42,340 |
| March | 23,802 | 935 | 678 | 768 | 47,210 |
| April | 131,157 | 12,300 | 977 | 4,370 | 260,100 |
| May | 118,570 | 4,900 | 3,100 | 3,820 | 235,200 |
| June | 205,090 | 10,400 | 4,600 | 6,840 | 406,800 |
| July | 211,510 | 10,000 | 4,710 | 6,820 | 419,500 |
| August | 186,070 | 10,600 | 3,860 | 6,000 | 369,100 |
| September | 177,520 | 10,600 | 3,540 | 5,920 | 352,100 |
| Water year 1943-44 | 1,212,915 | 12,300 | 627 | 3,310 | 2,406,000 |

## SOURIS RIVER NEAR SHERWOOD, NORTH DAKOTA

Location: In NE¼ of Sec. 33, T. 164 N., Range 87 W., about 16 miles northwest of Sherwood, North Dakota and ¾ miles south of International boundary; can be reached by driving west on county road that passes on the north side of Sherwood until the Souris River is crossed on Stafford bridge, then turn north and follow up the river road about 1½ miles to the William Harkness farm.

Drainage Area: 9,570 square miles.

Records available: March 1930 to September 1944

Average discharge 10 years 71.5 second-feet

Extremes: Maximum discharge 5,320 second-feet April 12, 1943. No flow for periods in most years.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1929-30** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 11-31 | ..... | 601 | 98 | 366 | 15,200 |
| April | ..... | 817 | 130 | 460 | 27,400 |
| May | ..... | 130 | 49 | 90.2 | 5,550 |
| June | ..... | 46 | 18 | 31.7 | 1,890 |
| July | ..... | 26 | 7.3 | 13.6 | 836 |
| August | ..... | 6.6 | .3 | 2.72 | 167 |
| September | ..... | .2 | ..... | .02 | 1.2 |
| Water year 1929-30 | ..... | ..... | ..... | ..... | 51,044.2 |
| **1930-31** | | | | | |
| October | ..... | 2.1 | ..... | 1.48 | 91 |
| November 1-22 | ..... | 1.4 | .6 | 1.15 | 50 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 2-30 | ..... | 18 | 3.6 | 12.4 | 713 |
| May | ..... | 16 | 3.8 | 8.71 | 536 |
| June | ..... | 3.5 | ..... | 1.06 | 63 |
| July | ..... | .3 | ..... | .06 | 4 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1930-31 | ..... | ..... | ..... | ..... | 1,457 |
| **1931-32** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 13-31 | ..... | 14 | .2 | 4.09 | 154 |
| April | ..... | 90 | 13 | 50.6 | 3,010 |
| May | ..... | 55 | 3.9 | 16.1 | 990 |
| June | ..... | 58 | 2 | 16.1 | 958 |
| July | ..... | 62 | .2 | 9.74 | 599 |
| August | ..... | 6.2 | ..... | 1.25 | 77 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1931-32 | ..... | ..... | ..... | ..... | 5,788 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1932-33** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February 26-28 | ..... | 23 | 3.0 | 15.7 | 93 |
| March | ..... | 13.50 | 6.0 | 247 | 15,200 |
| April | ..... | 1,140 | 58 | 224 | 13,300 |
| May | ..... | 563 | 23 | 75.8 | 4,660 |
| June | ..... | 1,000 | 49 | 341 | 20,300 |
| July | ..... | 49 | 3.6 | 20.0 | 1,230 |
| August | ..... | 17 | 0.7 | 5.40 | 332 |
| September | ..... | 1.0 | 0.6 | 0.75 | 45 |
| Water year 1932-33 | ..... | ..... | ..... | ..... | 55,160 |
| **1933-34** | | | | | |
| October | ..... | 2.6 | 0.8 | 1.53 | 94 |
| November 1-22 | ..... | 2.0 | 1.0 | 1.71 | 75 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February 14-28 | ..... | 128 | 9.8 | 46.9 | 1,390 |
| March | ..... | 344 | 81 | 195 | 12,000 |
| April | ..... | 155 | 32 | 89.3 | 5,310 |
| May | ..... | 32 | 6.0 | 14.9 | 918 |
| June | ..... | 5.8 | 2.2 | 3.61 | 215 |
| July | ..... | 2.2 | .2 | 1.36 | 84 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1933-34 | ..... | ..... | ..... | ..... | 20,086 |
| **1934-35** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 79.0 | 37 | ..... | 2.55 | 157 |
| April | 1,456.9 | 165 | 1.0 | 48.6 | 2,890 |
| May | 1,375 | 85 | 15 | 44.4 | 2,730 |
| June | 429.8 | 20 | 5.9 | 14.3 | 852 |
| July | 995.2 | 140 | 5.3 | 32.1 | 1,970 |
| August | 84.3 | 4.8 | .8 | 2.72 | 167 |
| September | 7.9 | .7 | 0 | .26 | 16 |
| Water year 1934-35 | 4,428.1 | 165 | 0 | 12.1 | 8,782 |
| **1935-36** | | | | | |
| October | 4.3 | 0.5 | ..... | 0.14 | 9 |
| November | 4.9 | .4 | ..... | .16 | 10 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 18,054 | 1,270 | ..... | 602 | 35,810 |
| May | 5,446 | 419 | 59 | 176 | 10,800 |
| June | 677.3 | 54 | 5.4 | 22.6 | 1,340 |
| July | 51.4 | 5.4 | ..... | 1.66 | 102 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1935-36 | 24,237.9 | 1,270 | ..... | 66.2 | 48,071 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1936-37** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 439.7 | 118 | ..... | 14.7 | 872 |
| May | 112.3 | 10 | 1.4 | 3.62 | 223 |
| June | 16.9 | 1.6 | ..... | .56 | 34 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1936-37 | 568.9 | 118 | ..... | 1.56 | 1,129 |
| **1937-38** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 12,642 | 1,030 | ..... | 408 | 25,080 |
| April | 3,875 | 452 | 32 | 129 | 7,690 |
| May | 1,222 | 60 | 22 | 39.4 | 2,420 |
| June | 241.2 | 22 | 2.5 | 8.04 | 478 |
| July | 63.4 | 5.2 | .8 | 2.05 | 126 |
| August | 9.5 | .8 | ..... | .31 | 19 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1937-38 | 18,053.1 | 1,030 | 0 | 49.5 | 35,813 |
| **1938-39** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 16,790 | 2,460 | ..... | 542 | 33,300 |
| April | 16,815 | 1,920 | 72 | 560 | 33,350 |
| May | 1,100 | 68 | 15 | 35.5 | 2,180 |
| June | 291.1 | 19 | 5.2 | 9.70 | 577 |
| July | 366.9 | 53 | 3.9 | 11.8 | 728 |
| August | 57.8 | 4.9 | .2 | 1.86 | 115 |
| September | 1.4 | .2 | ..... | .05 | 3 |
| Water year 1938-39 | 35,422.2 | 2,460 | ..... | 97.0 | 70,250 |
| **1939-40** | | | | | |
| October | 2.4 | 0.2 | ..... | .08 | 5 |
| November | 8.9 | ..... | ..... | .30 | 18 |
| December | 3.1 | ..... | ..... | .1 | 6 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 1.1 | ..... | ..... | .04 | 2 |
| April | 457.5 | 75 | .1 | 15.2 | 907 |
| May | 380.6 | 22 | 5.6 | 12.3 | 755 |
| June | 90.9 | 10 | .4 | 3.03 | 180 |
| July | 3.7 | .3 | ..... | .12 | 7 |
| August | 13.8 | 1.6 | ..... | .45 | 27 |
| September | 1.0 | ..... | ..... | .03 | 2 |
| Water Year 1939-40 | 963.0 | 75 | ..... | 2.63 | 1,909 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre Feet |
|---|---|---|---|---|---|
| **1940-41** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 29.0 | 24 | ..... | 0.94 | 58 |
| April | 12,960 | 1,020 | 16 | 432 | 25,710 |
| May | 3,103 | 194 | 47 | 100 | 6,150 |
| June | 1,306 | 69 | 26 | 43.5 | 2,590 |
| July | 362.5 | 25 | 4.8 | 11.7 | 719 |
| August | 121.2 | 11 | 1.1 | 3.91 | 240 |
| September | 40.1 | 3.7 | .5 | 1.34 | 80 |
| Water Year 1940-41 | 17,921.8 | 1,020 | ..... | 49.1 | 35,550 |
| **1941-42** | | | | | |
| October | 39.2 | 3.4 | .5 | 1.26 | 78 |
| November | 117.5 | 5.2 | 2.3 | 3.92 | 233 |
| December | 91.7 | 5.8 | .7 | 2.96 | 182 |
| January | 6.0 | .7 | .1 | .19 | 12 |
| February | 1.9 | .1 | ..... | .07 | 4 |
| March | 3,278.7 | 340 | ..... | 106 | 6,500 |
| April | 20,494 | 1,700 | 150 | 683 | 40,650 |
| May | 4,418 | 245 | 70 | 143 | 8,760 |
| June | 1,627 | 134 | 26 | 54.2 | 3,230 |
| July | 997 | ..... | ..... | 32.2 | 1,980 |
| August | 633.4 | 38 | 9.7 | 20.4 | 1,260 |
| September | 295.5 | 16 | 6.9 | 9.85 | 5,860 |
| Water Year 1941-42 | 31,999.9 | 1,700 | ..... | 87.7 | 68,750 |
| **1942-43** | | | | | |
| October | 200.2 | 9.7 | 4.0 | 6.46 | 397 |
| November | 182.6 | 7.5 | 3.2 | 6.09 | 362 |
| December | 85.8 | 3.6 | 2.0 | 2.77 | 170 |
| January | 86.4 | ..... | ..... | 2.79 | 171 |
| February | 35.6 | ..... | ..... | 1.27 | 71 |
| March | 1,562 | 750 | ..... | 50.4 | 3,100 |
| April | 82,846 | 5,320 | 564 | 2,761 | 164,300 |
| May | 10,438 | 540 | 182 | 337 | 20,700 |
| June | 5,160 | 217 | 147 | 172 | 10,230 |
| July | 2,681 | 152 | 37 | 86.5 | 5,320 |
| August | 802 | 38 | 16 | 25.9 | 1,590 |
| September | 503.5 | 35 | 8.1 | 16.8 | 999 |
| Water Year 1942-43 | 104,583.1 | 5,320 | ..... | 287 | 207,400 |
| **1943-44** | | | | | |
| October | 189.4 | 8.4 | 4 | 6.11 | 376 |
| November | 208.3 | 8.3 | 5.8 | 6.94 | 413 |
| December | 188 | 8 | 4.6 | 6.06 | 373 |
| January | 119.9 | 4.6 | 2.7 | 3.87 | 238 |
| February | 105 | 3.8 | 3.2 | 3.62 | 208 |
| March | 113.1 | 4.7 | 3.4 | 3.65 | 224 |
| April | 1,959.7 | 140 | 3.6 | 65.3 | 3,890 |
| May | 1,002 | 49 | 22 | 32.3 | 1,990 |
| June | 4,773 | 639 | 21 | 159 | 9,470 |
| July | 11,246 | 1,240 | 56 | 363 | 22,310 |
| August | 2,001 | 77 | 54 | 64.5 | 39,070 |
| September | 1,027.7 | 57 | 9.7 | 34.3 | 2,040 |
| Water year 1943-44 | 22,933.1 | 1,240 | 2.7 | 62.7 | 45,500 |

## SOURIS RIVER NEAR FOXHOLM, NORTH DAKOTA

Location: Water stage recorder and artificial control, lat. 48°22′, long. 101°30′, in SW¼SE¼ sec. 34, T. 157N., R. 84W., 3 miles east of Foxholm.

Drainage Area: 10,100 square miles.

Records Available: June 1904 to November 1905, April 1937 to September 1944.

Extremes: Maximum discharge 2,990 second-feet April 25, 1943.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1936-37** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 4.9 | .3 | ..... | .16 | 10 |
| May | 458.0 | 201 | ..... | 14.8 | 908 |
| June | 109.2 | 4.7 | 2.1 | 3.64 | 217 |
| July | 38.0 | 4.0 | ..... | 1.23 | 75 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water Year 1936-37 | 610.1 | ..... | ..... | ..... | 1210 |
| **1937-38** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 369 | 184 | ..... | 11.9 | 732 |
| April | 2,886.9 | 418 | .1 | 96.2 | 5,730 |
| May | 11.9 | 2.2 | ..... | .38 | 24 |
| June | 50.4 | 12 | ..... | 1.68 | 100 |
| July | 392.4 | 49 | ..... | 12.7 | 778 |
| August | 1,139 | 43 | 29 | 36.7 | 2,260 |
| September | 1,395 | 92 | 29 | 46.5 | 2,770 |
| Water Year 1937-38 | 6,244.6 | 418 | ..... | 17.1 | 12,394 |
| **1938-39** | | | | | |
| October | 900.3 | 92 | ..... | 29.0 | 1,790 |
| November | 57.1 | 16 | .2 | 1.90 | 113 |
| December | 53.4 | 7.7 | .6 | 1.72 | 106 |
| January | 17.5 | .7 | ..... | .56 | 35 |
| February | 11.2 | ..... | ..... | .40 | 22 |
| March | 454.0 | 110 | ..... | 14.6 | 900 |
| April | 10,893.2 | 656 | 1.0 | 363 | 21,600 |
| May | 5.5 | .8 | ..... | .18 | 11 |
| June | 221.5 | 35 | .1 | 7.38 | 439 |
| July | 2.4 | .3 | ..... | .08 | 5 |
| August | .5 | .3 | ..... | .02 | 1 |
| September | 7.3 | .7 | ..... | .24 | 14 |
| Water Year 1938-39 | 12,623.9 | 656 | 0 | 34.6 | 25,040 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1939-40** | | | | | |
| October | 2,768.7 | 497 | 0.1 | 89.3 | 5,490 |
| November | 15.0 | ..... | ..... | .5 | 30 |
| December | 12.1 | ..... | ..... | .4 | 25 |
| January | 6.2 | ..... | ..... | .2 | 12 |
| February | 8.7 | ..... | ..... | .3 | 17 |
| March | 18.1 | .7 | ..... | .584 | 36 |
| April | 2,808.6 | 246 | .6 | 93.6 | 5,570 |
| May | 109.6 | 17 | .1 | 3.5 | 217 |
| June | 24.7 | 3.0 | ..... | 8.2 | 49 |
| July | 1,263.6 | 137 | .2 | 40.8 | 2,510 |
| August | 1,747.2 | 154 | 1.0 | 56.4 | 3,470 |
| September | 37.9 | 2.0 | .7 | 1.26 | 75 |
| Water Year 1939-40 | 8,820.7 | 497 | ..... | 24.1 | 17,501 |
| **1940-41** | | | | | |
| October | 45.7 | 12 | 0.3 | 1.47 | 91 |
| November | 6.1 | .1 | .1 | .20 | 12 |
| December | 3.1 | ..... | ..... | .10 | 6 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 2.4 | .6 | ..... | .08 | 5 |
| April | 4,051.2 | 458 | ..... | 135 | 8,040 |
| May | 56.9 | 1.4 | .3 | 1.84 | 113 |
| June | 21.3 | 1.7 | ..... | .71 | 42 |
| July | 29.1 | 1.8 | .1 | .94 | 58 |
| August | 65.8 | 14 | .1 | 2.12 | 131 |
| September | 3.2 | .6 | ..... | .11 | 6 |
| Water Year 1940-41 | 4,284.8 | 458 | ..... | 11.7 | 8,500 |
| **1941-42** | | | | | |
| October | 643.2 | 62 | 0 | 20.7 | 1,280 |
| November | 390.2 | 49 | 2 | 13 | 774 |
| December | 38 | ..... | ..... | 1.23 | 75 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | ..... | ..... | ..... | ..... |
| May | ..... | ..... | ..... | ..... | ..... |
| June | 19.9 | 14 | ● | .66 | 39 |
| July | .8 | .4 | 0 | .03 | 2 |
| August | 1.1 | .4 | 0 | .04 | 2 |
| September | 144.3 | 28 | 0 | 4.81 | 286 |
| Water Year 1941-42 | 1,237.5 | 62 | 0 | 3.39 | 2,460 |
| **1942-43** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 299.4 | 56 | 0 | 9.66 | 594 |
| April | 54,556 | 2,790 | 123 | 1,819 | 108,200 |
| May | 28,358 | 2,070 | 411 | 915 | 56,250 |
| June | 13,567 | 526 | 425 | 452 | 26,910 |
| July | 7,515 | 425 | 97 | 242 | 14,910 |
| August | 2,300.6 | 230 | 0 | 74.2 | 4,560 |
| September | 203.6 | 72 | 0 | 6.79 | 404 |
| Water Year 1942-43 | 106,709.6 | 2,790 | 0 | 293 | 211,800 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1943-44 | | | | | |
| October | 2.1 | .1 | ..... | .07 | 4.2 |
| November | 1.1 | .1 | ..... | .04 | 2.2 |
| December | 736.2 | 154 | ..... | 23.7 | 1,460 |
| January | 4,335 | 157 | 130 | 140 | 8,600 |
| February | 3,490 | 130 | 80 | 120 | 6,920 |
| March | 2,535 | 85 | 80 | 81.8 | 5,030 |
| April | 1,965.1 | 196 | ..... | 65.5 | 3,900 |
| May | 322.8 | 41 | ..... | 10.4 | 640 |
| June | 917.5 | 37 | ..... | 30.6 | 1,820 |
| July | 971.2 | 97 | ..... | 31.3 | 1,930 |
| August | 3,472 | 120 | 97 | 111 | 6,800 |
| September | 3,000 | 110 | 95 | 100 | 5,950 |
| Water year 1943-44 | 21,703 | 196 | ..... | 59.3 | 43,060 |

## DES LACS RIVER NEAR FOXHOLM, NORTH DAKOTA

Location: At the highway bridge at Foxholm, North Dakota.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre Feet |
|---|---|---|---|---|---|
| 1903-04 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | ..... | ..... | ..... | ..... |
| May | ..... | ..... | ..... | ..... | ..... |
| June 23-30 | ..... | 41 | 34 | 38.1 | 605 |
| July | ..... | 32 | 16 | 23.3 | 1,433 |
| August | ..... | 15.3 | 3 | 8.8 | 540 |
| September | ..... | 6.6 | 3 | 4.9 | 290 |
| Water Year 1903-04 | ..... | ..... | ..... | ..... | 2,868 |
| 1904-05 | | | | | |
| October | ..... | 9 | 3.5 | 7.8 | 477 |
| November 1-24 | ..... | 6 | 2 | 3.6 | 173 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 18 days | ..... | 37 | 7 | 17.3 | 618 |
| April | ..... | 6.5 | 2.5 | 3.9 | 232 |
| May | ..... | 5 | 2.5 | 3.1 | 191 |
| June | ..... | 8 | 1 | 3.1 | 184 |
| July | ..... | 40 | .5 | 4.8 | 295 |
| August | ..... | 250 | 2 | 16.5 | 1,014 |
| September | ..... | 1.5 | 1 | 1.0 | 60 |
| Water Year 1904-05 | ..... | ..... | ..... | ..... | 3,244 |
| 1905-06 | | | | | |
| October | ..... | 1 | 1 | 1.0 | 61 |
| November | ..... | 3 | 1 | 2.0 | 119 |
| December 1-16 | ..... | 2 | 2 | 2.0 | 64 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 25-31 | ..... | 265 | 19 | 118 | 1,640 |
| April | ..... | 355 | 7.0 | 59.6 | 3,550 |
| May | ..... | 38 | 2.4 | 13.6 | 836 |
| June | ..... | 41 | 2.4 | 19.8 | 1,180 |
| July | ..... | 2.4 | 0.9 | 1.1 | 68 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water Year 1905-06 | ..... | ..... | ..... | ..... | 7,518 |

## SOURIS RIVER ABOVE MINOT, NORTH DAKOTA

Location: Water stage recorder and concrete control, lat. 48°14′45″, long. 101°22′15″ near center of sec. 17. T. 155 N., R. 83W, 3½ miles west of Minot.

Drainage Area: 11,300 square miles.

Records Available: May 1903 to March 1924, April 1927 to September 1928, October 1929 to September 1934, at site at Minot, 10 miles downstream and October 1934 to September 1944 at present site.

Average discharge 31 years (1913-44) 116 second-feet.

Extremes: Maximum discharge 12,000 second-feet April 20, 1904 from rating curve extended above 8,100 second-feet.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1902-03** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | ..... | ..... | ..... | ..... |
| May 5-31 | ..... | 347 | 191 | 251 | 13,442 |
| June | ..... | 599 | 191 | 324 | 19,279 |
| July | ..... | 401 | 178 | 271 | 16,663 |
| August | ..... | 248 | 165 | 186 | 11,437 |
| September | ..... | 1,134 | 178 | 695 | 41,355 |
| Water year 1902-03 | ..... | ..... | ..... | ..... | 102,176 |
| **1903-04** | | | | | |
| October | ..... | 509 | 205 | 293 | 18,016 |
| November 1-9 | ..... | 191 | 178 | 188 | 3,356 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | ..... | ..... | ..... | ..... |
| May | ..... | ..... | ..... | ..... | ..... |
| June | ..... | ..... | ..... | ..... | ..... |
| July | ..... | 427 | 152 | 258 | 15,900 |
| August | ..... | 152 | 108 | 114 | 7,010 |
| September | ..... | 108 | 68 | 81.7 | 4,860 |
| Water year 1903-04 | ..... | ..... | ..... | ..... | 49,142 |
| **1904-05** | | | | | |
| October | ..... | 87 | 68 | 71.8 | 4,410 |
| November 1-25 | ..... | 87 | 50 | 643 | 3,190 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 5-31 | ..... | 112 | 85 | 103 | 5,516 |
| April | ..... | 85 | 40 | 68.8 | 4,094 |
| May | ..... | 130 | 40 | 69.3 | 4,261 |
| June | ..... | 121 | 76 | 104 | 6,188 |
| July | ..... | 112 | 67 | 87.9 | 5,405 |
| August | ..... | 112 | 40 | 75.1 | 4,618 |
| September | ..... | 94 | 4 | 31.3 | 1,862 |
| Water year 1904-05 | ..... | ..... | ..... | ..... | 39,544 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1905-06** | | | | | |
| October | ..... | 22 | 4 | 13.9 | 855 |
| November 1-28 | ..... | 40 | 22 | 28.4 | 1,577 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 1,320 | 240 | 454 | 27,000 |
| May | ..... | 218 | 108 | 159 | 9.780 |
| June | ..... | 499 | 286 | 401 | 23,900 |
| July | ..... | 286 | 130 | 214 | 13,200 |
| August | ..... | 130 | 31 | 61.9 | 3,810 |
| September | ..... | 31 | 18 | 26.2 | 1,560 |
| Water year 1905-06 | ..... | ..... | ..... | ..... | 81,682 |
| **1906-07** | | | | | |
| October | ..... | 18 | 8 | 16.1 | 990 |
| November 1-18 | ..... | 18 | 18 | 18.0 | 643 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 621 | 35 | 183 | 10,900 |
| May | ..... | 2,190 | 707 | 1,500 | 92,200 |
| June | ..... | 2,100 | 268 | 820 | 48.800 |
| July | ..... | 885 | 243 | 470 | 28.900 |
| August | ..... | 219 | 52 | 104 | 6.400 |
| September | ..... | 52 | 20 | 36.2 | 2,150 |
| Water year 1906-07 | ..... | ..... | ..... | ..... | 190,983 |
| **1907-08** | | | | | |
| October | ..... | ..... | ..... | 20 | 1,230 |
| November | ..... | ..... | ..... | 16 | 952 |
| December | ..... | ..... | ..... | 11 | 676 |
| January | ..... | ..... | ..... | 8 | 492 |
| February | ..... | ..... | ..... | 6 | 345 |
| March | ..... | ..... | ..... | 20 | 1,230 |
| April | ..... | 644 | 174 | 311 | 18,500 |
| May | ..... | 163 | 109 | 136 | 8.360 |
| June | ..... | 407 | 152 | 239 | 14,200 |
| July | ..... | 174 | 99 | 125 | 7,690 |
| August | ..... | 120 | 80 | 94.1 | 5,790 |
| September | ..... | 89 | 28 | 63.0 | 3,750 |
| Water year 1907-08 | ..... | ..... | ..... | ..... | 63,250 |
| **1908-09** | | | | | |
| October | ..... | 35 | 15 | 23.1 | 1,420 |
| November | ..... | 35 | ..... | 30 | 1,790 |
| December | ..... | ..... | ..... | 15 | 922 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 21-30 | ..... | 546 | 243 | 411 | 8,970 |
| April | ..... | 1,080 | 436 | 727 | 43,300 |
| May | ..... | 422 | 231 | 289 | 17.800 |
| June | ..... | 546 | 174 | 322 | 19,200 |
| July | ..... | 163 | 29 | 82.1 | 5,050 |
| August | ..... | 70 | 11 | 37.7 | 2,320 |
| September | ..... | 52 | .5 | 15.5 | 922 |
| Water year 1908-09 | ..... | ..... | ..... | ..... | 101,694 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Runoff in Acre-Feet |
|---|---|---|---|---|---|
| **1909-10** | | | | | |
| October | ..... | .57 | .5 | .509 | 31 |
| November | ..... | .57 | .5 | .507 | 30 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | 0.5 | 31 |
| February | ..... | ..... | ..... | .5 | 28 |
| March | ..... | 196 | ..... | 127 | 7,810 |
| April | ..... | 207 | 141 | 171 | 10,200 |
| May | ..... | 141 | 79 | 110 | 6,960 |
| June | ..... | 70 | 28 | 46.6 | 2,770 |
| July | ..... | 38 | 10 | 21.9 | 1,350 |
| August | ..... | 7 | .3 | 2.13 | 131 |
| September | ..... | 6 | .2 | .40 | 24 |
| Water year 1909-10 | ..... | ..... | ..... | ..... | 29,365 |
| **1910-11** | | | | | |
| October | ..... | .6 | .5 | .52 | 32 |
| November | ..... | .7 | .5 | .57 | 34 |
| December | ..... | ..... | ..... | .5 | 31 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 19-31 | ..... | 14 | 2.6 | 6.80 | 175 |
| April | ..... | 744 | 14 | 339 | 20,200 |
| May | ..... | 722 | 146 | 449 | 27,600 |
| June | ..... | 214 | 55 | 138 | 8,210 |
| July | ..... | 64 | 14 | 34.1 | 2,100 |
| August | ..... | 24 | 3.6 | 15.6 | 959 |
| September | ..... | 4.4 | .7 | 2.27 | 135 |
| Water year 1910-11 | ..... | ..... | ..... | ..... | 59,476 |
| **1911-12** | | | | | |
| October | ..... | 7.6 | .7 | 2.55 | 157 |
| November | ..... | 18 | ..... | 10.1 | 601 |
| December | ..... | ..... | ..... | 2 | 123 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 24-31 | ..... | 450 | 13 | 173 | 2,750 |
| April | ..... | 1,200 | 306 | 695 | 41,400 |
| May | ..... | 983 | 235 | 511 | 31,400 |
| June | ..... | 498 | 69 | 239 | 14,200 |
| July | ..... | 69 | 60 | 66.7 | 4,100 |
| August | ..... | 60 | 30 | 42.7 | 2,630 |
| September | ..... | 52 | 24 | 33.5 | 1,990 |
| Water year 1911-12 | ..... | ..... | ..... | ..... | 99,351 |
| **1912-13** | | | | | |
| October | ..... | 69 | 24 | 48.0 | 2,950 |
| November | ..... | 69 | 30 | 42.3 | 2,520 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | 59 | 3,620 |
| April | ..... | 1,080 | 266 | 795 | 47,300 |
| May | ..... | 266 | 90 | 144 | 8,880 |
| June | ..... | 90 | 23 | 30.4 | 1,800 |
| July | ..... | 174 | 17 | 74.9 | 4,610 |
| August | ..... | 125 | 68 | 87.3 | 5,370 |
| September | ..... | 79 | 5.6 | 20.6 | 1,220 |
| Water year 1912-13 | ..... | ..... | ..... | ..... | 78,270 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre Feet |
|---|---|---|---|---|---|
| **1913-14** | | | | | |
| October | ..... | 5.6 | 2.5 | 3.17 | 195 |
| November | ..... | 47 | 3 | 24.5 | 1,460 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | 665 | ..... | 186 | 11,400 |
| April | ..... | 1,080 | 266 | 646 | 38,400 |
| May | ..... | 293 | 150 | 227 | 14,000 |
| June | ..... | 482 | 137 | 265 | 15,800 |
| July | ..... | 200 | 9 | 47.8 | 2,940 |
| August | ..... | 9 | 2 | 5.10 | 314 |
| September | ..... | 6.5 | 1.8 | 4.07 | 242 |
| Water year 1913-14 | ..... | ..... | ..... | ..... | 84,751 |
| **1914-15** | | | | | |
| October | ..... | 1.8 | 1.4 | 1.6 | 98 |
| November | ..... | 3.8 | 1.8 | 2.87 | 171 |
| December | ..... | ..... | ..... | 1.0 | 62 |
| January | ..... | ..... | ..... | 1.0 | 61 |
| February | ..... | ..... | ..... | 1.0 | 56 |
| March | ..... | ..... | ..... | 3.0 | 184 |
| April | ..... | 27 | 8 | 20.9 | 1,240 |
| May | ..... | 27 | 14.5 | 19.8 | 1,220 |
| June | ..... | 41 | 12 | 20.6 | 1,230 |
| July | ..... | 17 | 12 | 14.9 | 916 |
| August | ..... | 17 | 8 | 12.1 | 744 |
| September | ..... | 8 | 6.5 | 7.05 | 420 |
| Water year 1914-15 | ..... | 41 | ..... | 8.9 | 6,401 |
| **1915-16** | | | | | |
| October | ..... | 5.0 | 1.0 | 1.87 | 115 |
| November | ..... | 1.0 | .8 | .93 | 55 |
| December | ..... | ..... | ..... | .60 | 37 |
| January | ..... | ..... | ..... | .60 | 37 |
| February | ..... | ..... | ..... | 1.50 | 86 |
| March | ..... | ..... | ..... | 6.0 | 369 |
| April | ..... | 3,010 | 150 | 1,440 | 85,700 |
| May | ..... | 4,200 | 482 | 2,000 | 123,000 |
| June | ..... | 455 | 239 | 336 | 20,000 |
| July | ..... | 320 | 92 | 205 | 12,600 |
| August | ..... | 137 | 33 | 58.0 | 3,570 |
| September | ..... | 33 | 23 | 26.3 | 1,560 |
| Water year 1915-16 | ..... | 4,200 | ..... | 340 | 247,129 |
| **1916-17** | | | | | |
| October | ..... | 29 | 23 | 25.3 | 1,560 |
| November | ..... | ..... | ..... | 31.6 | 1,880 |
| December | ..... | ..... | ..... | 22.2 | 1,360 |
| January | ..... | ..... | ..... | 12.5 | 766 |
| February | ..... | ..... | ..... | 5.4 | 299 |
| March | ..... | ..... | ..... | 74.1 | 4,560 |
| April | ..... | 1,280 | 452 | 912 | 54,300 |
| May | ..... | 1,250 | 253 | 801 | 49,200 |
| June | ..... | 253 | 113 | 196 | 11,600 |
| July | ..... | 113 | 24 | 63.8 | 3,920 |
| August | ..... | 24 | .8 | 12.9 | 793 |
| September | ..... | .8 | .3 | .5 | 30 |
| Water year 1916-17 | ..... | 1,280 | .3 | 180 | 130,268 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1917-18** | | | | | |
| October | ..... | ..... | ..... | 5.24 | 322 |
| November | ..... | ..... | ..... | 31.8 | 1,890 |
| December | ..... | ..... | ..... | 15.3 | 941 |
| January | ..... | ..... | ..... | 5.87 | 361 |
| February | ..... | ..... | ..... | 13.2 | 733 |
| March | ..... | 790 | ..... | 258 | 15,900 |
| April | ..... | 750 | 96 | 241 | 14,300 |
| May | ..... | 296 | 4.4 | 97.6 | 6,000 |
| June | ..... | 68 | 3.2 | 23.8 | 1,420 |
| July | ..... | 7.0 | 1.6 | 3.82 | 235 |
| August | ..... | 11.0 | 2.4 | 5.55 | 341 |
| September | ..... | 16.0 | 7.0 | 12.7 | 756 |
| Water year 1917-18 | ..... | ..... | ..... | ..... | 43,199 |
| **1918-19** | | | | | |
| October | ..... | ..... | ..... | 18 | 1,110 |
| November | ..... | ..... | ..... | 18 | 1,070 |
| December | ..... | ..... | ..... | 18.5 | 1,140 |
| January | ..... | ..... | ..... | 11 | 676 |
| February | ..... | ..... | ..... | 6.5 | 361 |
| March | ..... | 118 | ..... | 20 | 1,230 |
| April | ..... | 1,860 | 155 | 1,200 | 71,400 |
| May | ..... | 469 | 56 | 199 | 12,200 |
| June | ..... | 50 | 17 | 33.3 | 1,980 |
| July | ..... | 25 | 5.5 | 11.1 | 682 |
| August | ..... | 4.0 | .7 | 2.2 | 135 |
| September | ..... | 1.0 | .7 | .8 | 49 |
| Water year 1918-19 | ..... | 1,860 | ..... | 127 | 92,033 |
| **1919-20** | | | | | |
| October | ..... | .7 | .5 | .60 | 37 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 13-31 | ..... | ..... | ..... | 22.4 | 844 |
| April | ..... | 1,960 | 25 | 871 | 51,800 |
| May | ..... | 2,560 | 204 | 1,220 | 75,000 |
| June | ..... | 194 | 70 | 129 | 7,680 |
| July | ..... | 85 | 17 | 34.6 | 2,130 |
| August | ..... | 17 | 2.4 | 7.07 | 435 |
| September | ..... | 11 | 2.4 | 6.27 | 373 |
| Water year 1919-20 | ..... | ..... | ..... | ..... | 138,299 |
| **1920-21** | | | | | |
| October | ..... | 11 | 7 | 8.5 | 523 |
| November | ..... | ..... | ..... | 7.6 | 452 |
| December | ..... | ..... | ..... | 5.0 | 307 |
| January | ..... | ..... | ..... | 1.7 | 105 |
| February | ..... | ..... | ..... | 1.1 | 61 |
| March | ..... | ..... | ..... | 28.0 | 1,720 |
| April | ..... | 296 | 68 | 176 | 10,500 |
| May | ..... | 104 | 34 | 59.4 | 3,650 |
| June | ..... | 272 | 21 | 53.6 | 3,190 |
| July | ..... | 790 | 215 | 381 | 23,400 |
| August | ..... | 194 | 14 | 49.3 | 3,030 |
| September | ..... | 29 | 14 | 20.8 | 1,240 |
| Water year 1920-21 | ..... | 790 | ..... | 66.6 | 48,178 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1921-22** | | | | | |
| October | ..... | 14 | 12 | 13.0 | 799 |
| November | ..... | ..... | ..... | 15 | 892 |
| December | ..... | ..... | ..... | 12 | 738 |
| January | ..... | ..... | ..... | 12 | 738 |
| February | ..... | ..... | ..... | 12 | 666 |
| March | ..... | 563 | 12 | 162 | 9,960 |
| April | ..... | 2,570 | 230 | 1,420 | 84,500 |
| May | ..... | 648 | 162 | 316 | 19,400 |
| June | ..... | 270 | 39 | 134 | 7,970 |
| July | ..... | 148 | 21 | 45.9 | 2,820 |
| August | ..... | 30 | 5 | 14.8 | 910 |
| September | ..... | 17 | 2 | 6.03 | 359 |
| Water year 1921-22 | ..... | 2,570 | 2 | 180 | 129,752 |
| **1922-23** | | | | | |
| October | ..... | 1.9 | 0.9 | 1.66 | 102 |
| November | ..... | 4.6 | 1.1 | 1.73 | 103 |
| December | ..... | ..... | ..... | 1.0 | 62 |
| January | ..... | ..... | ..... | 1.0 | 62 |
| February | ..... | ..... | ..... | .7 | 39 |
| March | ..... | 212 | 34 | 85.9 | 5,280 |
| April | ..... | 3,460 | 122 | 1,410 | 83,900 |
| May | ..... | 3,460 | 281 | 1,340 | 82,400 |
| June | ..... | 862 | 97 | 230 | 13,700 |
| July | ..... | 844 | 130 | 491 | 30,200 |
| August | ..... | 424 | 91 | 256 | 15,700 |
| September | ..... | 260 | 13 | 74.1 | 4,410 |
| Water year 1922-23 | ..... | 3,460 | ..... | 326 | 235,958 |
| **1923-24** | | | | | |
| October | ..... | 30 | 10 | 22.0 | 1,350 |
| November | ..... | 17 | 7 | 11.1 | 660 |
| December | ..... | 13 | 7 | 10.0 | 615 |
| January | ..... | 7 | 3 | 6.0 | 369 |
| February | ..... | 6 | 1 | 1.3 | 75 |
| March | ..... | 281 | 13 | 103 | 6,330 |
| April | ..... | 474 | 75 | 257 | 15,300 |
| May | ..... | 234 | 75 | 152 | 9,320 |
| June | ..... | 388 | 8 | 141 | 8,420 |
| July | ..... | 117 | 28 | 72 | 4,400 |
| August | ..... | 110 | 6 | 20 | 1,800 |
| September | ..... | 14 | 6 | 10 | 620 |
| Water year 1923-24 | ..... | 472 | 1 | 68 | 49,259 |
| **1924-25** | | | | | |
| October | ..... | 580 | 19 | 77 | 1,570 |
| November | ..... | 50 | 25 | 31 | 1,740 |
| December | ..... | 30 | 25 | 29 | 1,600 |
| January | ..... | 25 | 17 | 22 | 1,050 |
| February | ..... | 40 | 17 | 24 | 830 |
| March | ..... | 605 | 25 | 154 | 7,500 |
| April | ..... | 3,450 | 654 | 2,426 | 143,000 |
| May | ..... | 1,180 | 115 | 309 | 19,000 |
| June | ..... | 169 | 101 | 134 | 7,950 |
| July | ..... | 177 | 6 | 65 | 3,510 |
| August | ..... | 401 | 6 | 47 | 2,460 |
| September | ..... | 295 | 5 | 43 | 2,380 |
| Water year 1924-25 | ..... | 3,450 | 5 | 280 | 192,590 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1925-26** | | | | | |
| October | ..... | 30 | 21 | 25 | 1,560 |
| November | ..... | 35 | 21 | 27 | 1,630 |
| December | ..... | 25 | 19 | 22 | 1,340 |
| January | ..... | 19 | 13 | 17 | 1,030 |
| February | ..... | 17 | 11 | 14 | 750 |
| March | ..... | 30 | 9 | 18 | 1,110 |
| April | ..... | 90 | 38 | 66 | 3,900 |
| May | ..... | 101 | 50 | 86 | 5,230 |
| June | ..... | 194 | 60 | 93 | 5,530 |
| July | ..... | 194 | 101 | 144 | 8,850 |
| August | ..... | 101 | 64 | 78 | 4,800 |
| September | ..... | 103 | 34 | 54 | 3,230 |
| Water year 1925-26 | ..... | 194 | 9 | 53 | 38,960 |
| **1926-27** | | | | | |
| October | ..... | 112 | 31 | 36 | 2,200 |
| November | ..... | 31 | 21 | 25 | 1,480 |
| December | ..... | 21 | 19 | 21 | 1,270 |
| January | ..... | 21 | 13 | 14 | 830 |
| February | ..... | 21 | 9 | 13 | 700 |
| March | ..... | 478 | 25 | 177 | 10,900 |
| April 4-30 | ..... | 3,900 | 562 | 1,860 | 99,600 |
| May | ..... | 3,650 | 1,320 | 2,270 | 140,000 |
| June 1-13 | ..... | 1,820 | 1,140 | 1,640 | 42,300 |
| July | ..... | 267 | 144 | 190 | 11,700 |
| August | ..... | 188 | 64 | 115 | 7,100 |
| September | ..... | 153 | 80 | 102 | 6,050 |
| Water year 1926-27 | ..... | 3,620 | 9 | 435 | 315,600 |
| **1927-28** | | | | | |
| October | ..... | 108 | 86 | 99.4 | 6,110 |
| November | ..... | 92 | ..... | 62.7 | 3,730 |
| December | ..... | ..... | ..... | 21.5 | 1,320 |
| January | ..... | ..... | ..... | 12.0 | 738 |
| February | ..... | ..... | ..... | 10.0 | 575 |
| March | ..... | ..... | ..... | 169 | 10,400 |
| April | ..... | 2,940 | 694 | 1,740 | 104,000 |
| May | ..... | 730 | 184 | 460 | 28,300 |
| June | ..... | 500 | 135 | 221 | 13,200 |
| July | ..... | 840 | 276 | 486 | 29,900 |
| August | ..... | 820 | 57 | 268 | 16,500 |
| September | ..... | 50 | 13 | 21.9 | 1,300 |
| Water year 1927-28 | ..... | 2,940 | 13 | 297 | 216,073 |
| **1928-29** | | | | | |
| October | ..... | 29 | 20 | 24 | 1,480 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 14-30 | ..... | 152 | 112 | 136 | 4,600 |
| May | ..... | 117 | 31 | 61 | 3,750 |
| June | ..... | 397 | 54 | 178 | 10,600 |
| July | ..... | 50 | 3 | 19.6 | 1,200 |
| August | ..... | ..... | ..... | 3.0 | 184 |
| September | ..... | ..... | ..... | 5.3 | 315 |
| Water year 1928-29 | ..... | ..... | ..... | ..... | 22,129 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1929-30** | | | | | |
| October | ..... | 6 | 3 | 4.4 | 271 |
| November | ..... | 12 | 1 | 5.0 | 298 |
| December | ..... | ..... | ..... | 1.0 | 62 |
| January | ..... | ..... | ..... | .5 | 31 |
| February | ..... | 295 | 0 | 53.3 | 2,960 |
| March | ..... | 382 | 21 | 185 | 11,400 |
| April | ..... | 920 | 202 | 573 | 34,100 |
| May | ..... | 202 | 57 | 116 | 7,130 |
| June | ..... | 57 | 36 | 43.8 | 2,610 |
| July | ..... | ..... | ..... | 18 | 1,110 |
| August | ..... | ..... | ..... | .5 | 31 |
| September | ..... | ..... | ..... | .15 | 9 |
| Water year 1929-30 | ..... | 920 | 0 | 82.8 | 60,012 |
| **1930-31** | | | | | |
| October | ..... | 0.6 | 0.1 | 0.25 | 15 |
| November | ..... | 1.0 | .2 | .44 | 26 |
| December | ..... | 1.0 | .2 | .45 | 28 |
| January | ..... | .6 | .2 | .28 | 17 |
| February | ..... | 1.0 | .2 | .50 | 28 |
| March | ..... | 3.3 | 1.0 | 2.26 | 139 |
| April | ..... | 7.5 | 3.3 | 5.44 | 324 |
| May | ..... | 8.0 | .9 | 4.01 | 247 |
| June | ..... | 1.0 | .3 | .71 | 42 |
| July | ..... | ..... | ..... | .50 | 31 |
| August | ..... | ..... | ..... | .4 | 25 |
| September | ..... | ..... | ..... | .3 | 18 |
| Water year 1930-31 | ..... | 8.0 | 0.1 | ..... | 940 |
| **1931-32** | | | | | |
| October | ..... | ..... | ..... | 0.3 | 18 |
| November | ..... | ..... | ..... | .2 | 12 |
| December | ..... | ..... | ..... | .2 | 12 |
| January | ..... | ..... | ..... | .1 | 6 |
| February | ..... | ..... | ..... | .1 | 6 |
| March | ..... | 2.0 | 0.1 | .85 | 52 |
| April | ..... | 230 | 2.0 | 60.5 | 3,600 |
| May | ..... | 28 | 3.0 | 14.2 | 873 |
| June | ..... | 202 | 1.0 | 14.6 | 869 |
| July | ..... | 6.0 | .5 | 1.90 | 117 |
| August | ..... | .5 | .3 | .35 | 22 |
| September | ..... | ..... | ..... | .3 | 18 |
| Water year 1931-32 | ..... | 230 | ..... | 7.72 | 5,605 |
| **1932-33** | | | | | |
| October | ..... | ..... | ..... | 0.40 | 25 |
| November | ..... | ..... | ..... | .60 | 36 |
| December | ..... | ..... | ..... | .60 | 37 |
| January | ..... | ..... | ..... | .50 | 31 |
| February | ..... | 50 | ..... | 3.18 | 177 |
| March | ..... | 759 | 26 | 193 | 11,900 |
| April | ..... | 1,040 | 90 | 398 | 23,700 |
| May | ..... | 109 | 31 | 53.5 | 3,290 |
| June | ..... | 859 | 27 | 336 | 20,000 |
| July | ..... | ..... | ..... | 39.2 | 2,410 |
| August | ..... | ..... | ..... | 3.0 | 184 |
| September | ..... | ..... | ..... | 1 | 60 |
| Water year 1932-33 | ..... | 1,040 | ..... | 85.4 | 61,850 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1933-34** | | | | | |
| October | ..... | 0.2 | 0.1 | 0.17 | 10 |
| November | ..... | .4 | .2 | .26 | 15 |
| December | ..... | .4 | .3 | .36 | 22 |
| January | ..... | .3 | .3 | .30 | 18 |
| February | ..... | 40 | .2 | 3.50 | 194 |
| March | ..... | 328 | 20 | 184 | 11,340 |
| April | ..... | 190 | 37 | 124 | 7,380 |
| May | ..... | 34 | 1 | 9.65 | 593 |
| June | ..... | .3 | .2 | .23 | 14 |
| July | ..... | 1.5 | .3 | .87 | 54 |
| August | ..... | 1.5 | 1.5 | 1.50 | 92 |
| September | ..... | 1.5 | 1.5 | 1.50 | 89 |
| Water year 1933-34 | ..... | 328 | .1 | 27.4 | 19.821 |
| **1934-35** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 256.0 | 100 | ..... | 8.26 | 508 |
| April | 283 | 50 | ..... | 9.43 | 561 |
| May | 2,017.4 | 428 | 1.5 | 65.1 | 4,000 |
| June | 9.2 | 3.2 | ..... | .31 | 18 |
| July | 536.8 | 43 | ..... | 17.3 | 1,060 |
| August | 132.9 | 16 | ..... | 4.29 | 264 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1934-35 | 3,235.3 | 428 | ..... | 8.86 | 6,411 |
| **1935-36** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 1,809.6 | 326 | ..... | 60.3 | 3,590 |
| May | 809.5 | 208 | .7 | 26.1 | 1,610 |
| June | 2,451 | 120 | 35 | 81.7 | 4,860 |
| July | 1,538 | 99 | 10 | 49.6 | 3,050 |
| August | 2,154 | 84 | 40 | 69.5 | 4,270 |
| September | 164.0 | 32 | 0 | 5.47 | 325 |
| Water year 1935-36 | 8,926.1 | 326 | ..... | 24.4 | 17,705 |
| **1936-37** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 0.1 | ..... | ..... | ..... | 0.2 |
| April | 38.2 | 5.2 | 0.1 | 1.27 | 76 |
| May | 428.6 | 184 | ..... | 13.8 | 850 |
| June | 6.4 | 3.0 | ..... | .21 | 13 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1936-37 | 473.3 | 184 | ..... | 1.30 | 939.2 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1937-38** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 1,048.6 | 141 | .5 | 33.8 | 2,080 |
| April | 3,069.6 | 407 | .1 | 102 | 6,090 |
| May | 12.7 | 2.4 | ..... | .41 | 25 |
| June | ..... | ..... | ..... | ..... | ..... |
| July | 174 | 32 | ..... | 5.61 | 345 |
| August | 947 | 32 | 27 | 30.5 | 1,880 |
| September | 1,057 | 44 | 24 | 35.2 | 2,100 |
| Water year 1937-38 | 6,308.9 | 407 | 0 | 17.3 | 12,520 |
| **1938-39** | | | | | |
| October | 928.4 | 85 | 0.1 | 29.9 | 1,840 |
| November | 25.6 | 9.0 | .3 | .853 | 51 |
| December | 112.6 | 17 | .2 | 3.63 | 223 |
| January | 3.1 | ..... | ..... | .1 | 7 |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 5,086.0 | 1,400 | ..... | 164 | 10,090 |
| April | 11,313.9 | 668 | 5.1 | 377 | 22,440 |
| May | 81.7 | 11 | .2 | 2.64 | 162 |
| June | 181.8 | 32 | .4 | 6.06 | 361 |
| July | 10.5 | 2.0 | 0 | .34 | 21 |
| August | .5 | .2 | ..... | .02 | 1 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1938-39 | 17,744.1 | 1,400 | ..... | 48.6 | 35,200 |
| **1939-40** | | | | | |
| October | 2,706.2 | 460 | ..... | 87.3 | 5,370 |
| November | 79.4 | 3.6 | ..... | 2.65 | 157 |
| December | 62.0 | ..... | ..... | 2.0 | 123 |
| January | 12.4 | ..... | ..... | .4 | 25 |
| February | 14.5 | ..... | ..... | .5 | 29 |
| March | 11.7 | 1.0 | ..... | 3.77 | 23 |
| April | 2,736.8 | 280 | .1 | 91.2 | 5,430 |
| May | 188.5 | 20 | .3 | 6.08 | 374 |
| June | 7.5 | 1.3 | ..... | .25 | 15 |
| July | 960 | 130 | ..... | 31.0 | 1,900 |
| August | 1,818.3 | 153 | ..... | 58.7 | 3,610 |
| September | 2.1 | 0.2 | ..... | .07 | 4.2 |
| Water year 1939-40 | 8,599.4 | 460 | ..... | 23.5 | 17,060.2 |
| **1940-41** | | | | | |
| October | 1.4 | 0.1 | 0 | 0.05 | 3 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | .9 | .2 | ..... | .03 | 2 |
| April | 4,273.0 | 467 | 1.0 | 142 | 8,480 |
| May | 101.4 | 13 | .4 | 3.27 | 201 |
| June | 569.4 | 84 | .7 | 19.0 | 1,130 |
| July | 49.9 | 8.8 | 0 | 1.61 | 99 |
| August | 14.8 | 2.0 | 0 | .48 | 29 |
| September | 37.2 | 3.6 | .1 | 1.24 | 74 |
| Water year 1940-41 | 5,048.0 | 467 | 0 | 13.8 | 10,020 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1941-42 | | | | | |
| October | 563.4 | 61 | .5 | 18.2 | 1,120 |
| November | 528.2 | 54 | 3.0 | 17.6 | 1,050 |
| December | 58.5 | 3.0 | 1.0 | 1.89 | 116 |
| January | 10.4 | .5 | .3 | .34 | 21 |
| February | 1.4 | .2 | 0 | .05 | 3 |
| March | 240.7 | 30 | 0 | 7.76 | 477 |
| April | 2,104 | 550 | 10 | 70.1 | 4,170 |
| May | 208.3 | 19 | 2.4 | 6.72 | 413 |
| June | 33.1 | 2.4 | .2 | 1.10 | 66 |
| July | 59.2 | 22 | .1 | 1.91 | 117 |
| August | 34.2 | 16 | 0 | 1.10 | 68 |
| September | 146.2 | 28 | 0 | 4.87 | 290 |
| Water year 1941-42 | 3,987.6 | 550 | 0 | 109 | 7,910 |
| 1942-43 | | | | | |
| October | 13.2 | 1.0 | .2 | .43 | 26 |
| November | 12.5 | .7 | 0 | .42 | 25 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 4,643.5 | 1,100 | ..... | 150 | 9,210 |
| April | 52,655 | 2,450 | 800 | 1,755 | 104,400 |
| May | 30,675 | 1,960 | 428 | 990 | 60,840 |
| June | 15,490 | 684 | 441 | 576 | 30,720 |
| July | 8,274 | 454 | 100 | 267 | 16,410 |
| August | 2,721.3 | 221 | 5.1 | 87.8 | 5,400 |
| September | 441.9 | 67 | 3.6 | 14.7 | 876 |
| Water year 1942-43 | 114,926.4 | 2,450 | 0 | 315 | 227,900 |
| 1943-44 | | | | | |
| October | 80.4 | 13 | .7 | 2.59 | 159 |
| November | 71.5 | 6 | ..... | 2.38 | 142 |
| December | 465 | 95 | ..... | 15 | 922 |
| January | 4,584 | 180 | 130 | 148 | 9,090 |
| February | 4,025 | 150 | 80 | 139 | 7,980 |
| March | 2,690 | 100 | 80 | 86.8 | 5,340 |
| April | 2,270 | 300 | 16 | 142 | 8,470 |
| May | 502.1 | 41 | 8.1 | 16.2 | 996 |
| June | 6,247 | 1,330 | 39 | 208 | 12,390 |
| July | 4,090.1 | 1,100 | 8.1 | 132 | 8,110 |
| August | 3,958 | 158 | 110 | 128 | 7,850 |
| September | 3,576 | 153 | 112 | 119 | 7,090 |
| Water year 1943-44 | 34,559.1 | 1,330 | .7 | 94.4 | 68,540 |

## SOURIS RIVER NEAR VERENDRYE, NORTH DAKOTA

Location: Water stage recorder, lat. 48°09′ long. 100°44′, in NW¼NW¼ sec 17, T. 154N., R78W 3 miles northeast of Verendrye, 4 miles downstream from former site, and 7½ miles southwest of mouth of Wintering River.

Drainage Area: 12,200 square miles.

Records available: February to June 1933 April 1937 to September 1944 (winter records incom.).

Extremes: Maximum discharge 2,220 second-feet May 2, 1943, Minimum, .3 second-foot Aug. 11-19 1937, Oct. 10-21, 1939.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1936-37 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 352.0 | 19 | 4 | 11.7 | 698 |
| May | 399.4 | 93 | 3.2 | 12.9 | 792 |
| June | 558.9 | 118 | 1.6 | 18.6 | 1,110 |
| July | 20.8 | 1.6 | .4 | .67 | 41 |
| August | 12.9 | .6 | .3 | .12 | 26 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water Year 1936-37 | 1,344 | ..... | ..... | ..... | 2,667 |
| 1937-38 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 3,452 | 300 | 17 | 111 | 6,850 |
| April | 2,941 | 330 | 12 | 98.0 | 5,830 |
| May | 210.7 | 12 | 3.6 | 6.80 | 418 |
| June | 69.8 | 3.3 | 1.4 | 2.33 | 138 |
| July | 246.7 | 56 | .8 | 7.96 | 489 |
| August | 396.2 | 49 | .8 | 12.8 | 786 |
| September | 635 | 27 | 12 | 21.2 | 1,260 |
| Water Year 1937-38 | 7,951.4 | ..... | ..... | ..... | 15,771 |
| 1938-39 | | | | | |
| October | 1,200.1 | 76 | 3.9 | 38.7 | 2,380 |
| November | 101.1 | 4.5 | 2.4 | 3.37 | 201 |
| December | 75.6 | 3.6 | 1.5 | 2.44 | 150 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 21-31 | 9,233.8 | 1,200 | 4.8 | 839 | 18,310 |
| April | 12,163 | 662 | 55 | 405 | 24,120 |
| May | 591.6 | 52 | 9.6 | 19.1 | 1,170 |
| June | 331.4 | 25 | 6.0 | 11.1 | 657 |
| July | 271.4 | 52 | 2.8 | 8.75 | 538 |
| August | 72.8 | 5.6 | 1.4 | 2.35 | 144 |
| September | 24.4 | 1.6 | .4 | .81 | 48 |
| Water Year 1938-39 | 24,065.2 | ..... | ..... | ..... | 47,718 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1939-40** | | | | | |
| October | 2,377.2 | 396 | 0.3 | 76.7 | 4,720 |
| November | 236.6 | 25 | ..... | 7.89 | 469 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 69.8 | 4.4 | ..... | 2.25 | 138 |
| April | 2,754.6 | 350 | 4.0 | 91.8 | 5,460 |
| May | 745.0 | 85 | 11 | 24.0 | 1,480 |
| June | 141.7 | 11 | 1.6 | 4.72 | 281 |
| July | 349.9 | 114 | 1.0 | 11.3 | 694 |
| August | 2,247.2 | 145 | 2.8 | 72.5 | 4,460 |
| September | 55.7 | 3.2 | 1.1 | 1.86 | 110 |
| Water Year 1939-40 | 8,977.7 | ..... | ..... | ..... | 17,812 |
| **1940-41** | | | | | |
| October | 49.6 | 2.0 | 1.1 | 1.60 | 98 |
| November | 41.9 | 2.8 | ..... | 1.40 | 83 |
| December | 78.1 | ..... | ..... | 2.52 | 155 |
| January | 62.9 | ..... | ..... | 2.03 | 125 |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 181.5 | 70 | ..... | 5.85 | 360 |
| April | 4,409 | 406 | 14 | 147 | 8,750 |
| May | 676.5 | 73 | 7.9 | 21.8 | 1,340 |
| June | 836.4 | 74 | 8.8 | 27.9 | 1,660 |
| July | 394.6 | 46 | 1.6 | 12.7 | 783 |
| August | 25.6 | 1.5 | .7 | .83 | 51 |
| September | 543.4 | 90 | .8 | 18.1 | 1,080 |
| Water Year 1940-41 | 7,299.5 | ..... | ..... | ..... | 14,485 |
| **1941-42** | | | | | |
| October | 503.5 | 60 | 8 | 16.2 | 999 |
| November | 844 | 60 | 8.5 | 28.1 | 1,670 |
| December | 1,505 | 9 | 1.9 | 48.5 | 299 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 255.4 | 18 | ..... | 8.24 | 507 |
| April | 7,043.8 | 1,100 | 8.8 | 235 | 13,970 |
| May | 939 | 56 | 18 | 30.3 | 1,860 |
| June | 377.4 | 18 | 9.8 | 12.6 | 749 |
| July | 308.1 | 16 | 6.7 | 99.4 | 611 |
| August | 192.2 | 9.2 | ..... | 6.2 | 381 |
| September | 105.3 | ..... | 2.4 | 35.1 | 209 |
| Water Year 1941-42 | 10,719.2 | ..... | ..... | ..... | 21,255 |
| **1942-43** | | | | | |
| October | 105.9 | 5.5 | 2.2 | 3.42 | 210 |
| November | 92 | 5 | 2.2 | 3.07 | 182 |
| December 1-29 | 60.8 | 2.6 | 1.8 | 2.1 | 121 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 23-31 | 7,179.6 | 1,300 | 4.6 | 797.7 | 14,240 |
| April | 47,780 | 2,160 | 1,170 | 1,593 | 94,770 |
| May | 40,663 | 2,220 | 449 | 1,312 | 80,650 |
| June | 17,014 | 858 | 449 | 567 | 33,750 |
| July | 10,178 | 513 | 171 | 328 | 20,190 |
| August | 4,223 | 267 | 35 | 136 | 8,380 |
| September | 10,135 | 86 | 9.5 | 338 | 2,010 |
| Water Year 1942-43 | 128,309.8 | ..... | ..... | ..... | 254,503 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre Feet |
|---|---|---|---|---|---|
| 1943-1944 | | | | | |
| October | 486 | 22 | 8.5 | ..... | 964 |
| November 1-12 | 213 | 22 | 15 | ..... | 422 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 5-30 | 7,410 | 600 | 52 | 285 | 14,700 |
| May | 1,120 | 55 | 24 | 36.1 | 2,220 |
| June | 5,674 | 1,230 | 18 | 189 | 11,250 |
| July | 10,064 | 1,450 | 43 | 325 | 19,960 |
| August | 3,590 | 133 | 99 | 116 | 7,120 |
| September | 3,661 | 142 | 113 | 122 | 7,260 |
| Water year 1943-44 | 32,218 | ..... | ..... | ..... | 63,896 |

## WINTERING RIVER NEAR KARLSRUHE, NORTH DAKOTA

Location: Water stage recorder and concrete control, lat. 48°10′, long. 100°32′, on line between secs. 10 & 11, T. 154N., R. 77W, 80 feet upstream from highway bridge 4 miles upstream from mouth and 7 miles northeast of Karlsruhe.

Drainage Area: 675 square miles.

Records available: March 1937 to September 1944 (no winter records).

Extremes: Maximum discharge 510 second-feet April 2, 1943. No flow at times in each year.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1936-37 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 81.0 | 15 | ..... | 2.61 | 161 |
| April | 179.1 | 13 | 3.0 | 5.97 | 355 |
| May | 66.4 | 3.6 | 1.4 | 2.14 | 132 |
| June | 384.8 | 36 | 1.4 | 12.8 | 763 |
| July | 35.0 | 2.6 | .7 | 1.13 | 69 |
| August | 18.7 | 1.2 | .2 | .60 | 37 |
| September | 20.6 | 1.0 | .4 | .69 | 41 |
| Water Year 1936-37 | 785.6 | ..... | ..... | ..... | 1,558 |
| 1937-38 | | | | | |
| October 1-28 | 33.2 | 1.5 | 0.8 | 1.19 | 66 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 467.3 | 54 | ..... | 15.1 | 927 |
| April | 117.5 | 7.2 | 2.3 | 3.92 | 233 |
| May | 74.0 | 3.7 | 1.6 | 2.39 | 147 |
| June | 35.0 | 1.6 | .6 | 1.17 | 69 |
| July | 76.5 | 10 | .6 | 2.47 | 152 |
| August | 29.4 | 3.1 | .1 | .95 | 58 |
| September | 5.8 | .4 | .1 | .19 | 12 |
| Water Year 1937-38 | 838.7 | ..... | ..... | ..... | 1,664 |
| 1938-39 | | | | | |
| October | 21.8 | 1.3 | 0.1 | 0.70 | 43 |
| November | 39.0 | 1.6 | 1.1 | 1.30 | 77 |
| December | 35.1 | 2.2 | ..... | 1.13 | 70 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 23-31 | 125 | 18 | 3 | 13.9 | 248 |
| April | 186.5 | 16 | 3.8 | 6.22 | 370 |
| May | 63.8 | 3.8 | 1.3 | 2.06 | 127 |
| June | 57.6 | 3.4 | .9 | 1.92 | 114 |
| July | 16.3 | 1.2 | ..... | .53 | 32 |
| August | 10.3 | 1.0 | ..... | .33 | 20 |
| September | 2.0 | .4 | ..... | .07 | 4 |
| Water year 1938-39 | 557.4 | ..... | ..... | ..... | 1,105 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1939-40** | | | | | |
| October | 25.1 | 1.0 | 0.2 | 0.81 | 50 |
| November | 24.9 | ..... | ..... | .83 | 49 |
| December | 12.4 | ..... | ..... | .40 | 25 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 31.6 | 4.0 | ..... | 1.02 | 63 |
| April | 120.1 | 8.4 | .3 | 4.00 | 238 |
| May | 145.2 | 10 | 2.0 | 4.68 | 288 |
| June | 34.1 | 2.4 | .3 | 1.14 | 68 |
| July | 74.7 | 4.8 | .7 | 2.41 | 148 |
| August | 38.6 | 2.5 | .6 | 1.25 | 77 |
| September | 27.4 | 1.3 | .6 | .91 | 54 |
| Water Year 1939-40 | 534.1 | 10 | ..... | 1.46 | 1,060 |
| **1940-41** | | | | | |
| October | 37.5 | 1.7 | 0.9 | 1.21 | 74 |
| November | 23.5 | 1.5 | .2 | .78 | 47 |
| December | 8.3 | .5 | ..... | .27 | 16 |
| January | 3.1 | ..... | ..... | .10 | 6.1 |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 6.0 | 5.0 | ..... | .19 | 12 |
| April | 334.8 | 26 | 4.4 | 11.16 | 664 |
| May | 190.6 | 22 | 2.2 | 6.15 | 378 |
| June | 113.8 | 5.8 | 2.2 | 3.79 | 226 |
| July | 116.2 | 6.9 | 1.7 | 3.75 | 230 |
| August | 43.2 | 2.4 | .9 | 1.39 | 86 |
| September | 159.2 | 13 | 2.0 | 5.31 | 316 |
| Water Year 1940-41 | 1,036.2 | 26 | ..... | 2.84 | 2,055.1 |
| **1941-42** | | | | | |
| October | 180.3 | 9.1 | 4.4 | 5.82 | 358 |
| November | 64.6 | 6.5 | 4.7 | 5.38 | 128 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 23-31 | 1.2 | .2 | .1 | .13 | 2.4 |
| April | 1,423.5 | 116 | .5 | 47.8 | 2,820 |
| May | 581 | 38 | 11 | 18.7 | 1,150 |
| June | 220.4 | 14 | 4.1 | 7.35 | 437 |
| July | 112.3 | 7.5 | 1.7 | 3.62 | 223 |
| August | 115.3 | 6.9 | 2.4 | 3.72 | 229 |
| September | 99.2 | 5.8 | 2.2 | 3.31 | 197 |
| Water Year 1941-42 | 2,797.8 | ..... | ..... | ..... | 5,544 |
| **1942-43** | | | | | |
| October | 83.7 | 3.8 | 2.0 | 2.70 | 166 |
| November | 89.1 | 4.4 | 1.5 | 2.97 | 177 |
| December | 23.8 | 1.3 | .6 | 7.68 | 47 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 29-31 | 970 | ..... | ..... | ..... | 1921 |
| April | 4,471 | 510 | 23 | 149 | 8,870 |
| May | 632 | 39 | 12 | 20.4 | 1,250 |
| June | 2,729 | 170 | 22 | 91.0 | 5,410 |
| July | 1,036 | 77 | 14 | 33.4 | 2,050 |
| August | 280.4 | 17 | 5.6 | 9.05 | 556 |
| September | 187.6 | 17 | 3.2 | 6.25 | 372 |
| Water Year 1942-43 | 10,502.6 | ..... | ..... | ..... | 20,820 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1943-44 | | | | | |
| October | 139.7 | 6.1 | 3.2 | 4.51 | 277 |
| November 1-12 | 80.4 | 8.1 | 4.8 | 6.7 | 159 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 271.7 | 14 | ..... | 9.06 | 539 |
| May | 276.2 | 16 | 6.6 | 8.91 | 548 |
| June | 581.9 | 48 | 7.1 | 19.4 | 1,150 |
| July | 688 | 34 | 15 | 22.2 | 1,360 |
| August | 266.4 | 16 | 4.4 | 8.59 | 528 |
| September | 153.1 | 7.1 | 4.4 | 5.1 | 304 |
| Water year 1943-44 | 2,457.4 | ..... | ..... | ..... | 4,865 |

## SOURIS RIVER NEAR TOWNER, NORTH DAKOTA

Location: In NE¼ of Section 29, Twp. 156 N., R. 76 W., Lat. 48° 18′, Long. 100° 27′ about 4 miles southwest of Towner.

Drainage Area: 13,090 square miles.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1932-33** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 4-31 | 8,352 | 535 | 54 | 298 | 16,600 |
| April | 16,843 | 1,080 | 166 | 561 | 33,400 |
| May | 3,675 | 203 | 88 | 119 | 7,320 |
| June | 11,617 | 850 | 80 | 387 | 23,000 |
| July | 2,497 | 166 | 32 | 80.5 | 4,950 |
| August | 385.3 | 32 | 3.4 | 12.4 | 762 |
| September | 90.3 | 11 | .6 | 3.01 | 179 |
| Water year 1932-33 | 43,459.6 | ..... | ..... | ..... | 86,211 |
| **1933-34** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 9-31 | 4,569 | 355 | 31 | 199 | 9,060 |
| April | 6,848 | 385 | 78 | 228 | 13,580 |
| May | 567.7 | 72 | 1.8 | 18.3 | 1,130 |
| June | 165.1 | 19 | ..... | 5.50 | 327 |
| July | 26.2 | 3.0 | ..... | .85 | 52 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water Year 1933-34 | 12,176 | ..... | ..... | ..... | 24,149 |
| **1934-35** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 23-31 | 685 | 124 | 40 | 76.1 | 1,360 |
| April | 948 | 78 | 17 | 31.6 | 1,880 |
| May | 2,621 | 230 | 35 | 84.5 | 5,200 |
| June | 509.6 | 35 | 6.0 | 17.0 | 1,010 |
| July | 2,871.6 | 320 | 4.0 | 92.6 | 5,700 |
| August | 623.0 | 68 | 7.2 | 20.1 | 1,240 |
| September | 146.8 | 12 | 2.2 | 4.89 | 291 |
| Water Year 1934-35 | 8,405 | ..... | ..... | ..... | 16,681 |
| **1935-36** | | | | | |
| October 1-18 | 54.9 | 4.0 | 1.9 | 3.05 | 109 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April 9-30 | 7,652 | 903 | 12 | 348 | 15,180 |
| May | 927 | 64 | 15 | 29.9 | 1,840 |
| June | 2,385 | 119 | 54 | 79.5 | 4,730 |
| July | 1,489 | 98 | 18 | 48.0 | 2,950 |
| August | 1,610 | 61 | 29 | 51.9 | 3,190 |
| September | 639.4 | 48 | .4 | 21.3 | 1,270 |
| Water Year 1935-36 | 14,757.3 | ..... | ..... | ..... | 29,269 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1936-37 | | | | | |
| October | 195.2 | 22 | 0.5 | 6.30 | 387 |
| November 1-11 | 65.2 | 7.6 | 4.4 | 5.93 | 129 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 10.5 | 3 | ..... | .34 | 21 |
| April | 34.7 | 4.5 | .1 | 1.16 | 69 |
| May | 13.2 | .7 | .2 | .43 | 26 |
| June | 526.6 | 132 | .2 | 17.6 | 1,040 |
| July | 588.2 | 140 | .5 | 19.0 | 1,170 |
| August | 10.8 | .9 | ..... | .35 | 21 |
| September | 5.2 | .6 | ..... | .17 | 10 |
| Water Year 1936-37 | 1,449.6 | ..... | ..... | ..... | 2,873 |
| 1937-38 | | | | | |
| October | 45.6 | 4.2 | 0.5 | 1.75 | 90 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 12-31 | 116.8 | 19 | .8 | 5.84 | 232 |
| April | 1.0 | 5.1 | 21 | .033 | 2 |
| May | 1,128 | 307 | 10 | 36.4 | 2,240 |
| June | 182.1 | 9.5 | 3.6 | 6.07 | 361 |
| July | 666.7 | 77 | 3.3 | 21.5 | 1,320 |
| August | 449.9 | 44 | 1.3 | 14.5 | 892 |
| September | 502.1 | 23 | 8.1 | 16.7 | 996 |
| Water Year 1937-38 | 3,092.2 | ..... | ..... | ..... | 6,133 |

## SOURIS RIVER NEAR BANTRY, NORTH DAKOTA

Location: Water stage recorder, lat. 48°30′, long. 100°25′, in SE¼ sec 14, T. 158N., R76W 8 miles east of Bantry.

Drainage Area: 13,400 square miles.

Records available: March 1937 to September 1944 (no winter records)

Extremes: Maximum discharge 1,910 second-feet May 15, 1943.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1936-37 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 13.5 | 1 | ..... | .44 | 27 |
| April | 329.2 | 26 | 2 | 11.0 | 653 |
| May | 94.2 | 5.0 | 1.7 | 3.04 | 187 |
| June | 457.3 | 86 | 2.8 | 15.2 | 907 |
| July | 1,078.3 | 118 | 2.0 | 34.8 | 2,140 |
| August | 33.5 | 5.9 | ..... | 1.08 | 66 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water Year 1936-37 | 2,006 | ..... | ..... | ..... | 3,980 |
| 1937-38 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 508.8 | 60 | ..... | 16.4 | 1,010 |
| April | 211.3 | 145 | .7 | 7.04 | 419 |
| May | 3,159 | 334 | 36 | 102 | 6,270 |
| June | 368.2 | 31 | 4.3 | 12.3 | 730 |
| July | 811.3 | 59 | 7.6 | 26.2 | 1,610 |
| August | 269.7 | 24 | 2.1 | 8.7 | 535 |
| September | 347.8 | 16 | 7.0 | 11.6 | 690 |
| Water Year 1937-38 | 5,676.6 | ..... | ..... | ..... | 11,264 |
| 1938-39 | | | | | |
| October | 1,351 | 98 | 11 | 43.6 | 2,680 |
| November | 167.3 | 9.7 | 3.8 | 5.58 | 332 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 23-31 | 297.3 | 240 | 1.0 | 33.0 | 590 |
| April | 15,561 | 850 | 283 | 519 | 30,860 |
| May | 2,039 | 226 | 18 | 65.8 | 4,040 |
| June | 522 | 23 | 14 | 17.4 | 1,040 |
| July | 340.4 | 19 | 5.5 | 11.0 | 675 |
| August | 62.4 | 6.5 | .1 | 2.01 | 124 |
| September | .3 | .1 | ..... | .01 | 1 |
| Water Year 1938-39 | 20,340.7 | ..... | ..... | ..... | 40,342 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1939-40** | | | | | |
| October | 1,144.2 | 260 | ..... | 36.9 | 2,270 |
| November | 952.0 | 200 | 3.2 | 31.7 | 1,890 |
| December 1-11 | 44.0 | 4.6 | 3.4 | 4.0 | 87 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 9-31 | 54.0 | 3.2 | 2.2 | 2.35 | 107 |
| April | 618.3 | 96 | 3.2 | 20.6 | 1,230 |
| May | 724.0 | 71 | 17 | 23.4 | 1,440 |
| June | 1,359.0 | 73 | 12 | 45.3 | 2,700 |
| July | 195.8 | 11 | 3.7 | 6.32 | 388 |
| August | 2,115.7 | 124 | 3.0 | 68.2 | 4,200 |
| September | 41.2 | 6.8 | .4 | 1.37 | 82 |
| Water Year 1939-40 | 7,248.2 | ..... | ..... | ..... | 14,394 |
| **1940-41** | | | | | |
| October | 21.0 | 1.0 | 0.3 | 0.68 | 42 |
| November | 15.0 | .8 | .4 | .50 | 30 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 3.8 | ..... | ..... | 1.9 | 7 |
| April | 713.6 | 60 | 2.0 | 23.8 | 1,420 |
| May | 5,630 | 447 | 35 | 182 | 11,170 |
| June | 1,428 | 74 | 34 | 47.6 | 2,830 |
| July | 797.6 | 42 | 4.2 | 25.7 | 1,580 |
| August | 92.0 | 10 | .6 | 2.97 | 182 |
| September | 945 | 50 | 10 | 31.5 | 1,870 |
| Water Year 1940-41 | 9,664.0 | ..... | ..... | ..... | 19,131 |
| **1941-42** | | | | | |
| October | 913 | 42 | 21 | 29.5 | 1,810 |
| November | 1,456 | 71 | 18 | 48.5 | 2,890 |
| December | 468 | 22 | 16 | 15.1 | 928 |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 20-31 | 154 | 17 | 8.5 | 12.8 | 305 |
| April | 9,412 | 850 | 18 | 314 | 18,670 |
| May | 2,974 | 161 | 50 | 95.9 | 5,900 |
| June | 1,042 | 50 | 19 | 34.7 | 2,070 |
| July | 616 | 32 | 14 | 19.9 | 1,220 |
| August | 417.7 | 25 | 8.2 | 13.5 | 828 |
| September | 242.7 | 11 | 6.6 | 8.1 | 481 |
| Water Year 1941-42 | 17,695.4 | ..... | ..... | ..... | 34,274 |
| **1942-43** | | | | | |
| October | 271.5 | 11 | 7 | 87.6 | 539 |
| November 1-27 | 400 | 17 | 11 | 14.8 | 793 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 29-31 | 251 | 220 | 12 | 83.7 | 498 |
| April | 39,550 | 1,660 | 440 | 1,318 | 78,450 |
| May | 48,529 | 1,910 | 712 | 1,565 | 96,260 |
| June | 23,243 | 931 | 610 | 775 | 46,100 |
| July | 15,071 | 610 | 346 | 486 | 29,890 |
| August | 6,143 | 357 | 66 | 198 | 12,180 |
| September | 1,683 | 87 | 20 | 56.1 | 3,340 |
| Water Year 1942-43 | 135,141.5 | ..... | ..... | ..... | 268,050 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre Feet |
|---|---|---|---|---|---|
| 1943-44 | | | | | |
| October | 501 | 17 | 15 | 16.2 | 994 |
| November 1-13 | 207 | 20 | ..... | 15.9 | 411 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 4,981 | 313 | ..... | 166 | 9,880 |
| May | 5,203 | 467 | 95 | 168 | 10,320 |
| June | 6,415 | 445 | 95 | 214 | 12,720 |
| July | 15,596 | 1,600 | 95 | 503 | 30,930 |
| August | 4,290 | 170 | 110 | 138 | 8,510 |
| September | 3,770 | 150 | 110 | 126 | 7,480 |
| Water year 1943-44 | 40,963 | ..... | ..... | ..... | 81,245 |

## SOURIS RIVER NEAR WESTHOPE, NORTH DAKOTA

Location: Water stage recorder and concrete control lat. 49°00′ long. 100°57′ in SW¼SE¼ sec. 30 T. 164N., R. 79W about 1,200 feet upstream from the International Boundry and 1 mile downstream from U. S. Fish and Wildlife Service dam 357 and 7 miles northeast of Westhope.

Drainage Area: 17,600 square miles.

Records available: October 1937 to September 1944 July 1929 to September 1937 at site 6¼ miles upstream.

Extremes: Maximum discharge, 2,240 second-feet May 22, 23, 1943; no flow during several periods.

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1928-29 | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | ..... | ..... | ..... | ..... |
| May | ..... | ..... | ..... | ..... | ..... |
| June | ..... | ..... | ..... | ..... | ..... |
| July 26-31 | ..... | 44 | 33 | 38.5 | 458 |
| August | ..... | 37 | 3 | 13.4 | 824 |
| September | ..... | 15 | 3 | 6.5 | 387 |
| Water year 1928-29 | ..... | ..... | ..... | ..... | 1,669 |
| 1929-30 | | | | | |
| October | ..... | 19 | 3 | 8.3 | 510 |
| November 1-17 | ..... | 33 | 16 | 20.5 | 691 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 23-31 | ..... | 1,130 | 992 | 1,040 | 18,600 |
| April | ..... | 1,130 | 753 | 922 | 54,900 |
| May | ..... | 726 | 138 | 388 | 23,900 |
| June | ..... | 138 | 66 | 101 | 6,010 |
| July | ..... | 84 | 11 | 41.0 | 2,520 |
| August | ..... | 14 | 2 | 5.4 | 332 |
| September | ..... | 14 | 2 | 8.7 | 518 |
| Water year 1929-30 | ..... | 1,130 | 2 | ..... | 107,981 |
| 1930-31 | | | | | |
| October | ..... | 43 | 1.8 | 11.1 | 682 |
| November 1-15 | ..... | 32 | 12 | 20.3 | 602 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | ..... | 118 | 25 | 58.4 | 3,480 |
| May | ..... | 44 | 9.6 | 22.5 | 1,380 |
| June | ..... | 13 | .4 | 4.81 | 286 |
| July | ..... | 14 | 0 | 2.24 | 138 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1930-31 | ..... | 118 | 0 | ..... | 6,568 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1931-32** | | | | | |
| October | ..... | ..... | ..... | 5.27 | 324 |
| November 1-18 | ..... | 14 | 4.9 | 9.85 | 352 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 24-31 | ..... | 24 | 9 | 18.0 | 286 |
| April | ..... | 134 | 27 | 73.8 | 4,390 |
| May | ..... | 169 | 22 | 63.3 | 3,890 |
| June | ..... | 63 | 6.9 | 26.3 | 1,560 |
| July | ..... | 31 | 3.3 | 12.6 | 775 |
| August | ..... | 14 | 0 | 2.07 | 127 |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1931-32 | ..... | 169 | 0 | ..... | 11.704 |
| **1932-33** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November 1-21 | ..... | 22 | ..... | 10.7 | 446 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 23-31 | ..... | 765 | 45 | 369 | 6,590 |
| April | ..... | 1,130 | 494 | 875 | 52,100 |
| May | ..... | 446 | 159 | 219 | 13,500 |
| June | ..... | 272 | 141 | 183 | 10,900 |
| July | ..... | 272 | 123 | 209 | 12 900 |
| August | ..... | 123 | 19 | 55.1 | 3,390 |
| September | ..... | 24 | 4.9 | 10.3 | 613 |
| Water year 1932-33 | ..... | 1,130 | 4.9 | ..... | 100,439 |
| **1933-34** | | | | | |
| October | ..... | 26 | 2.0 | 6.16 | 379 |
| November | ..... | 31 | 5.0 | 14.0 | 835 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March 21-31 | ..... | 279 | 94 | 180 | 3,920 |
| April | ..... | 524 | 121 | 294 | 17,520 |
| May | ..... | 121 | 12 | 56.2 | 3,460 |
| June | ..... | 10 | 1.1 | 4.62 | 275 |
| July | ..... | 2.5 | 0 | .77 | 48 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1933-34 | ..... | 524 | 0 | 0 | 26,437 |
| **1934-35** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 1,664 | 74. | 30 | 55.5 | 3,300 |
| May | 2,326 | 139 | 26 | 75.0 | 4,610 |
| June | 537.0 | 63 | 4.5 | 17.9 | 1,070 |
| July | 5,048 | 279 | 22 | 163 | 10,010 |
| August | 2,127 | 130 | 20 | 68.6 | 4,220 |
| September | 235.6 | 23 | .4 | 7.85 | 467 |
| Water year 1934-35 | ..... | ..... | ..... | ..... | 23,677 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| **1935-36** | | | | | |
| October | 9.7 | 1.6 | 0 | 0.31 | 19 |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 962.7 | 139 | 0 | 32.1 | 1,909 |
| May | .4 | .2 | ..... | .01 | .8 |
| June | 231 | 42 | ..... | 7.70 | 458 |
| July | 113.9 | 16 | .1 | 3.67 | 226 |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1935-36 | ..... | ..... | ..... | ..... | 2,612.8 |
| **1936-37** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 55.5 | 9.0 | ..... | 1.85 | 110 |
| May | ..... | ..... | ..... | ..... | ..... |
| June | ..... | ..... | ..... | ..... | ..... |
| July | ..... | ..... | ..... | ..... | ..... |
| August | ..... | ..... | ..... | ..... | ..... |
| September | ..... | ..... | ..... | ..... | ..... |
| Water year 1936-37 | 55.5 | 9.0 | ..... | .15 | 110 |
| **1937-38** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 4.9 | .8 | ..... | .16 | 10 |
| April | .8 | .3 | ..... | .03 | 2 |
| May | ..... | ..... | ..... | ..... | ..... |
| June | 223.9 | 42 | ..... | 7.46 | 444 |
| July | .2 | .2 | ..... | .01 | 1 |
| August | 243.3 | 20 | ..... | 7.85 | 483 |
| September | 8.5 | 3.2 | ..... | .28 | 17 |
| Water year 1937-38 | 481.6 | 42 | ..... | 1.32 | 957 |
| **1938-39** | | | | | |
| October | ..... | ..... | ..... | ..... | ..... |
| November | ..... | ..... | ..... | ..... | ..... |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 1.4 | .2 | ..... | .05 | 3 |
| April | 6.5 | .3 | ..... | .22 | 13 |
| May | .4 | .2 | ..... | .01 | 1 |
| June | 253.8 | 26 | ..... | 8.46 | 503 |
| July | ..... | ..... | ..... | ..... | ..... |
| August | 142 | 20 | ..... | 4.6 | 282 |
| September | 35.7 | 12 | ..... | 1.19 | 71 |
| Water year 1938-39 | 439.8 | 26 | ..... | 1.20 | 873 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre Feet |
|---|---|---|---|---|---|
| **1939-40** | | | | | |
| October | 317.1 | 27 | ..... | 10.2 | 629 |
| November | .1 | .1 | ..... | .003 | .2 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | 7.6 | 1.8 | ..... | .25 | 15 |
| May | 30.9 | 12 | .1 | 1.00 | 61 |
| June | 21.1 | 3.3 | .2 | .70 | 42 |
| July | 73.5 | 9.2 | 0 | 2.37 | 146 |
| August | 80.1 | 7.6 | .1 | 2.58 | 159 |
| September | 72.7 | 10 | .1 | 2.42 | 144 |
| Water year 1939-40 | 603.1 | 27 | ..... | 1.65 | 1,196.2 |
| **1940-41** | | | | | |
| October | 91.7 | 14 | 0.1 | 2.96 | 182 |
| November | .5 | .1 | 0 | .02 | 1 |
| December | 0 | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | ..... | ..... | ..... | ..... | ..... |
| April | .3 | .1 | ..... | .01 | 1 |
| May | 3.5 | .2 | .1 | .11 | 7 |
| June | 190.4 | 24 | .2 | 6.35 | 378 |
| July | 227.1 | 9.0 | 6 | 7.33 | 450 |
| August | 358.8 | 18 | 6.6 | 11.6 | 712 |
| September | 495 | 25 | 9.0 | 16.5 | 982 |
| Water year 1940-41 | 1,367.3 | 25 | ..... | 3.75 | 2,713 |
| **1941-42** | | | | | |
| October | 2,761 | 10 | 5.5 | 8.62 | 530 |
| November | 19.6 | 6 | .1 | .65 | 39 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 18.6 | 1.3 | ..... | .60 | 37 |
| April | 12,245.5 | 1,000 | .6 | 408 | 24,290 |
| May | 7,824.8 | 500 | 2.4 | 252 | 15,520 |
| June | 770.4 | 130 | 0 | 25.7 | 1,530 |
| July | 570.0 | 30 | 13 | 18.4 | 1,130 |
| August | 868 | 34 | 24 | 28.0 | 1,720 |
| September | 698.7 | 30 | 7.7 | 23.3 | 1,390 |
| Water year 1941-42 | 23,282.7 | 1,000 | ..... | 63.8 | 46,190 |
| **1942-43** | | | | | |
| October | 779 | 32 | 17 | 25.1 | 1,550 |
| November | 28.7 | 21 | 0 | .96 | 57 |
| December | ..... | ..... | ..... | ..... | ..... |
| January | ..... | ..... | ..... | ..... | ..... |
| February | ..... | ..... | ..... | ..... | ..... |
| March | 4.9 | 1.0 | ..... | .16 | 9.7 |
| April | 18,981.8 | 1,700 | ..... | 616 | 36,680 |
| May | 65,260 | 2,240 | 1,760 | 2,105 | 129,400 |
| June | 35,195 | 2,190 | 850 | 1,173 | 69,810 |
| July | 25 650 | 1,000 | 550 | 827 | 50,880 |
| August | 3,715.5 | 550 | 5.0 | 120 | 7,350 |
| September | 2,559 | 367 | ..... | 85.3 | 5,080 |
| Water year 1942-43 | 151,683.9 | 2,240 | ..... | 416 | 300,900 |

| Month | Second Foot Days | Maximum | Minimum | Mean | Run-off in Acre-Feet |
|---|---|---|---|---|---|
| 1943-44 | | | | | |
| October | 1,530.1 | 246 | 7.5 | 49.4 | 3,030 |
| November | 359.4 | 100 | .2 | 12 | 713 |
| December | 3.8 | .2 | .1 | .12 | 7.5 |
| January | .5 | .1 | ..... | .02 | 1 |
| February | 170.4 | ..... | ..... | 5.88 | 338 |
| March | 710 | ..... | ..... | 22.9 | 1,410 |
| April | 5,577 | 341 | 70 | 186 | 11,060 |
| May | 8,254.2 | 492 | 5.2 | 266 | 16,370 |
| June | 8,826 | 1,400 | 74 | 294 | 17,510 |
| July | 40,114 | 2,000 | 541 | 1,294 | 79,560 |
| August | 3,812.6 | 308 | 9.6 | 123 | 7,560 |
| September | 10,280 | 386 | 297 | 343 | 20,390 |
| Water year 1943-44 | 79,638 | 2,000 | ..... | 218 | 157,900 |

## LAKE DARLING NEAR FOXHOLM, NORTH DAKOTA

Location: Staff gage, lat. 48°27′, long. 101°35′, in NE¼NE¼ sec. 1. T. 157 N., R. 85W on control dam of Lake Darling, reservoir of Fish and Wildlife Service, on Souris River, about 6 miles north of Foxholm.

Records available: April 1937 to September 1944.

Extremes: Maximum observed 22.83 feet April 23, 24, 1943, minimum 1.53 feet March 1, 1938.

| Month | Maximum | | Minimum | |
|---|---|---|---|---|
| | Gage-height | Storage in Acre-Feet | Gage-height | Storage in Acre-Feet |
| **1937** | | | | |
| October | --------- | --------- | --------- | --------- |
| November | --------- | --------- | --------- | --------- |
| December | --------- | --------- | --------- | --------- |
| January | --------- | --------- | --------- | --------- |
| February | --------- | --------- | --------- | --------- |
| March | --------- | --------- | --------- | --------- |
| April | 4.1 | 12,300 | 3.8 | 11,500 |
| May | 4.3 | 12,900 | 3.1 | 9,750 |
| June | 3.8 | 11,500 | 2.9 | 9,250 |
| July | 2.7 | 8,750 | 2.2 | 7,500 |
| August | 1.8 | 6,600 | 1.5 | 6,000 |
| September | 1.5 | 6,000 | 1.5 | 6,000 |
| **1937-38** | | | | |
| October | 1.5 | 6,000 | 1.5 | 6,000 |
| November | 1.5 | 6,000 | 1.5 | 6,000 |
| December | 1.5 | 6,000 | 1.5 | 6,000 |
| January | 1.5 | 6,000 | 1.5 | 6,000 |
| February | 1.5 | 6,000 | 1.5 | 6,000 |
| March | 8.3 | 24,900 | 1.5 | 6,000 |
| April | 8.3 | 24,900 | 7.7 | 23,100 |
| May | 7.7 | 23,100 | 7.6 | 22,800 |
| June | 7.7 | 23,100 | 7.3 | 21,900 |
| July | 7.8 | 23,400 | 6.5 | 19,500 |
| August | 6.5 | 19,500 | 5.2 | 15,600 |
| September | 5.2 | 15,600 | 3.6 | 11,000 |
| **1938-39** | | | | |
| October | 3.6 | 11,000 | 2.7 | 8,750 |
| November | 2.7 | 8,750 | 1.9 | 6,800 |
| December | 1.9 | 6,800 | 1.9 | 6,800 |
| January | 1.9 | 6,800 | 1.9 | 6,800 |
| February | 1.9 | 6,800 | 1.9 | 6,800 |
| March | 10.8 | 34,200 | 1.9 | 6,800 |
| April | 13.2 | 47,200 | 10.8 | 34,200 |
| May | 12.2 | 41,200 | 12 | 40,000 |
| June | 12.1 | 40,600 | 11.9 | 39,500 |
| July | 11.9 | 39,500 | 11.5 | 37,500 |
| August | 11.5 | 37,500 | 11.1 | 35,500 |
| September | 11.1 | 35,500 | 10.82 | 34,300 |
| **1939-40** | | | | |
| October | 10.8 | 30,800 | 9.55 | 29,200 |
| November | 10 | 31,000 | 9.45 | 28,800 |
| December | 9.5 | 29,000 | 9.5 | 29,000 |
| January | 9.48 | 28,900 | 9.48 | 28,900 |
| February | 9.48 | 28,900 | 9.48 | 28,900 |
| March | 9.56 | 29,200 | 9.48 | 28,900 |
| April | 9.56 | 29,200 | 8.58 | 25,900 |
| May | 8.84 | 26,200 | 8.7 | 25,900 |
| June | 8.76 | 25,900 | 8.39 | 25,200 |
| July | 8.39 | 25,200 | 7.38 | 22,100 |
| August | 7.38 | 22,100 | 6.26 | 18,800 |
| September | 6.3 | 18,900 | 6 | 18,000 |

| Month | Maximum | | Minimum | |
|---|---|---|---|---|
| | Gage-height | Storage in Acre-Feet | Gage-height | Storage in Acre-Feet |
| **1940-41** | | | | |
| October | 6 | 18,000 | 5.64 | 16,900 |
| November | 5.9 | 17,700 | 5.64 | 16,900 |
| December | 5.9 | 17,700 | 5.75 | 17,200 |
| January | 5.75 | 17,200 | 5.59 | 16,800 |
| February | 5.59 | 16,800 | 5.45 | 16,400 |
| March | 5.45 | 16,400 | 5.3 | 15,900 |
| April | 9.1 | 27,400 | 5.3 | 15,900 |
| May | 9.94 | 30,800 | 9.10 | 27,400 |
| June | 10.4 | 32,600 | 9.94 | 30,800 |
| July | 10.4 | 32,600 | 10.14 | 31,600 |
| August | 10.14 | 31,600 | 9.70 | 29,800 |
| September | 9.90 | 30,600 | 9.7 | 29,800 |
| **1941-42** | | | | |
| October | 10 | 31,000 | 9.7 | 29,800 |
| November | 10 | 31,000 | 9.7 | 29,800 |
| December | 9.7 | 29,800 | 9.7 | 29,800 |
| January | 9.7 | 29,800 | 9.7 | 29,800 |
| February | 9.7 | 29,800 | 9.7 | 29,800 |
| March | 10.5 | 33,000 | 9.7 | 29,800 |
| April | 15.9 | 64,300 | 10.5 | 33,000 |
| May | 16.5 | 69,000 | 15.9 | 64,300 |
| June | 16.7 | 70,600 | 16.5 | 69 000 |
| July | 16.8 | 71,400 | 15.5 | 61,500 |
| August | 16.4 | 68,200 | 16.4 | 68,200 |
| September | 16.4 | 68,200 | 16.0 | 65,000 |
| **1942-43** | | | | |
| October | 16 | 65,000 | 15.8 | 63,600 |
| November | 15.8 | 63,600 | 15.8 | 63,600 |
| December | 15.8 | 63,600 | 15.8 | 63,600 |
| January | 15.8 | 63,600 | 15.8 | 63,600 |
| February | 15.8 | 63,600 | 15.8 | 63,600 |
| March | 16.8 | 71,400 | 15.8 | 63,600 |
| April | 22.8 | 124,000 | 16.8 | 71,400 |
| May | 21.4 | 115,400 | 18.8 | 87,400 |
| June | 19.5 | 95,000 | 17.9 | 80,200 |
| July | 17.8 | 79,400 | 17 | 73,000 |
| August | 17 | 73,000 | 16.5 | 69,000 |
| September | 16.5 | 69,000 | 16.1 | 65,800 |
| **1943-44** | | | | |
| October | 16.1 | 65,800 | 16.1 | 65,800 |
| November | 16.1 | 65,800 | 16.1 | 65,800 |
| December | 16.1 | 65,800 | 16 | 65,000 |
| January | 16 | 65,000 | 15 | 58,000 |
| February | 15 | 58,000 | 14.1 | 52,600 |
| March | 14.1 | 52,600 | 13.8 | 50,800 |
| April | 13.8 | 50,800 | 13.7 | 50,200 |
| May | 13.7 | 50,200 | 13.4 | 48,400 |
| June | 15.4 | 60,800 | 13.4 | 48,400 |
| July | 17.3 | 75,400 | 15.4 | 60,800 |
| August | 17.3 | 75,400 | 16.9 | 72,200 |
| September | 16.9 | 72,200 | 16.4 | 68,200 |

## DEVILS LAKE NEAR DEVILS LAKE, NORTH DAKOTA

Location: Temporary staff gage, lat. 48°03′45″, long. 98°56′30″, in SW¼ sec. 18, T. 153N., R. 64 W. at Lakewood, on east bank at mouth of Creel Bay, and 6 miles southwest of city of Devils Lake. Creel Bay, which is half a mile wide, is an arm of Devils Lake, and extends 2 miles to the north of the lake.

Records available: 1867, 1879, 1896, 1902-1936 (one gage height for each year) and 1937-1944 fragmentary.

Extremes: 1867-1944, maximum elevation observed 1,438.40 feet in 1867, present datum; minimum 1,401.14 feet September 23, 1940.

| Year | Elevation |
|---|---|
| 1867 | 1438 |
| 1879 | 1434.2 |
| 1896 | 1424.3 |
| 1901 | 1423.3 |
| 1902 | 1424.3 |
| 1903 | 1423 |
| 1904 | 1423.9 |
| 1905 | 1423.9 |
| 1906 | 1422.9 |
| 1907 | 1422.6 |
| 1908 | 1421.5 |
| 1909 | 1421.3 |
| 1910 | 1420.1 |
| 1911 | 1419.7 |
| 1912 | 1421 |
| 1913 | 1421.5 |
| 1914 | 1419.9 |
| 1915 | 1418.8 |
| 1916 | 1418.9 |
| 1917 | 1418.2 |
| 1918 | 1416.9 |
| 1919 | 1417.2 |
| 1920 | 1416.6 |
| 1921 | 1416.2 |
| 1922 | 1416.5 |
| 1923 | 1415.6 |
| 1924 | 1415.9 |
| 1925 | 1414.5 |
| 1926 | 1413.3 |
| 1927 | 1413.3 |
| 1928 | 1412.4 |
| 1929 | 1411.6 |
| 1930 | 1411.1 |
| 1931 | 1410.1 |
| 1932 | 1409.7 |
| 1933 | 1408.3 |
| 1934 | 1406.4 |
| 1935 | 1405.2 |
| 1936 | 1403.9 |

| Month | Elevation in Feet |
|---|---|
| **1936-1937** | |
| October 24 | 1405.08 |
| May 29 | 1404.89 |
| August 18 | 1404.23 |
| **1937-1938** | |
| October 26 | 1403.81 |
| March 21 | 1403.08 |
| April 15 | 1404.00 |
| May 19 | 1403.68 |
| June 11 | 1403.64 |
| July 2 | 1403.64 |
| August 6 | 1403.50 |
| September 15 | 1402.99 |
| **1938-1939** | |
| October 8 | 1402.64 |
| November 21 | 1402.14 |
| April 25 | 1402.66 |
| May 8 | 1402.21 |
| June 18 | 1402.46 |
| July 25 | 1401.86 |
| August 19 | 1401.79 |
| September 21 | 1401.46 |
| **1939-1940** | |
| March 22 | 1401.52 |
| April 29 | 1402.26 |
| August 12 | 1401.82 |
| September 23 | 1401.14 |
| **1940-1941** | |
| October 24 | 1400.87 |
| April 22 | 1402.54 |
| May 15 | 1402.62 |
| June 6 | 1402.84 |
| July 31 | 1402.17 |
| September 20 | 1402.26 |
| **1941-1942** | |
| October 11 | 1402.41 |
| May 20 | 1404.42 |
| June 8 | 1404.53 |
| July 31 | 1404.50 |
| August 5 | 1404.32 |
| September 11 | 1404.07 |
| **1942-1943** | |
| May 17 | 1404.44 |
| June 30 | 1404.7 |
| July 7 | 1404.6 |
| August 2 | 1404.46 |
| September 1 | 1404.01 |
| **1943-1944** | |
| October 4 | 1403.64 |
| November 3 | 1403.41 |
| January 3 | 1403.86 |
| February 3 | 1403.85 |
| March 1 | 1403.82 |
| April 8 | 1403.54 |
| May 31 | 1403.76 |
| June 18 | 1403.76 |
| July 6 | 1403.96 |
| August 24 | 1403.50 |
| September 19 | 1403.70 |