

METHOW RIVER BASIN

12448990 TWISP RIVER ABOVE NEWBY CREEK NEAR TWISP, WA

LOCATION.--Lat 48°22'51", long 120°15'38", in NW 1/4 NE 1/4 sec.7, T.33 N., R.21 E., Okanogan County, Hydrologic Unit 17020008, on right bank at county road bridge 6.0 mi west of Twisp city limits and at mile 8.1.

DRAINAGE AREA.--207 mi<sup>2</sup>.

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--October 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,040 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good, except for estimated daily discharges and discharges above 800 ft<sup>3</sup>/s, which are fair. Several small diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--2 year (water years 2001-2002), 192 ft<sup>3</sup>/s, 139,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,690 ft<sup>3</sup>/s June 16, 2002, gage height, 10.77 ft; maximum gage height, 10.94 ft June 16, 2002, from outside high water mark; minimum daily discharge, 24 ft<sup>3</sup>/s Sept. 23-25, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,690 ft<sup>3</sup>/s June 16, gage height, 10.77 ft; maximum gage height 10.94 ft June 16, from outside high-water mark; minimum discharge, 25 ft<sup>3</sup>/s Oct. 3-5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR   | MAY   | JUN   | JUL   | AUG  | SEP  |
|-------|------|------|------|------|------|------|-------|-------|-------|-------|------|------|
| 1     | 27   | 33   | 48   | 37   | e41  | e75  | 123   | 508   | 1380  | 816   | 150  | 57   |
| 2     | 26   | 32   | 48   | 37   | 42   | 79   | 123   | 659   | 1330  | 718   | 137  | 56   |
| 3     | 26   | 31   | 47   | 37   | 42   | 75   | 122   | 696   | 1360  | 670   | 129  | 55   |
| 4     | 25   | 31   | 45   | 36   | 41   | 75   | 129   | 633   | 1460  | 681   | 121  | 54   |
| 5     | 26   | 30   | e39  | 35   | 40   | 76   | 146   | 569   | 1710  | 598   | 115  | 53   |
| 6     | 26   | 31   | e42  | 36   | 40   | 75   | 170   | 516   | 1650  | 557   | 113  | 53   |
| 7     | 26   | 29   | e40  | 40   | 41   | e73  | 192   | 467   | 1230  | 567   | 112  | 52   |
| 8     | 26   | 29   | e42  | 53   | 41   | e72  | 200   | 431   | 1100  | 828   | 103  | 51   |
| 9     | 26   | 30   | e38  | 59   | 40   | e72  | 202   | 402   | 991   | 709   | 98   | 49   |
| 10    | 27   | 30   | e39  | 55   | 39   | 73   | 207   | 381   | 981   | 634   | 98   | 47   |
| 11    | 32   | 30   | e40  | 52   | 39   | 76   | 223   | 374   | 1100  | 687   | 100  | 46   |
| 12    | 29   | 30   | 41   | 52   | e36  | 76   | 247   | 406   | 1230  | 688   | 94   | 44   |
| 13    | 30   | 33   | 42   | 50   | e40  | 73   | 323   | 499   | 1390  | 622   | 90   | 42   |
| 14    | 30   | 48   | 42   | 49   | e45  | 71   | 515   | 613   | 1770  | 622   | 86   | 41   |
| 15    | 29   | 60   | e40  | e37  | e40  | 69   | 496   | 641   | 2060  | 548   | 87   | 40   |
| 16    | 29   | 59   | e42  | e41  | e35  | 70   | 436   | 651   | 1920  | 472   | 84   | 39   |
| 17    | 28   | 51   | 42   | e40  | 37   | 67   | 393   | 734   | 1370  | 450   | 79   | 39   |
| 18    | 28   | 45   | e39  | e40  | 36   | e63  | 360   | 823   | 1290  | 424   | 75   | 39   |
| 19    | 28   | 52   | e36  | e43  | 37   | 66   | 340   | 834   | 1130  | 401   | 71   | 39   |
| 20    | 28   | 57   | e33  | e44  | 37   | 66   | 332   | 984   | 1130  | 369   | 68   | 38   |
| 21    | 28   | 59   | e36  | e45  | 38   | 64   | 339   | 1090  | 1190  | 322   | 68   | 38   |
| 22    | 30   | 59   | e40  | e41  | 56   | 63   | 353   | 1030  | 1250  | 301   | 66   | 38   |
| 23    | 39   | 55   | 38   | e41  | 127  | 64   | 355   | 957   | 1280  | 290   | 64   | 37   |
| 24    | 33   | 49   | 37   | e44  | 105  | 68   | 343   | 927   | 1240  | 290   | 63   | 37   |
| 25    | 33   | 52   | 37   | e45  | e78  | 72   | 336   | 953   | 1200  | 282   | 65   | 36   |
| 26    | 32   | 48   | e35  | e43  | e79  | 76   | 334   | 1020  | 1250  | 275   | 76   | 37   |
| 27    | 32   | 46   | e33  | e41  | e81  | 79   | 329   | 1090  | 1310  | 252   | 70   | 37   |
| 28    | 32   | 47   | e37  | e39  | e78  | 82   | 320   | 1350  | 1220  | 221   | 65   | 36   |
| 29    | 30   | 46   | e36  | e37  | ---  | 86   | 332   | 1670  | 1140  | 203   | 62   | 35   |
| 30    | 31   | 47   | 37   | e42  | ---  | 92   | 387   | 1710  | 1000  | 187   | 60   | 35   |
| 31    | 34   | ---  | 37   | e44  | ---  | 108  | ---   | 1530  | ---   | 170   | 61   | ---  |
| TOTAL | 906  | 1279 | 1228 | 1335 | 1431 | 2296 | 8707  | 25148 | 39662 | 14854 | 2730 | 1300 |
| MEAN  | 29.2 | 42.6 | 39.6 | 43.1 | 51.1 | 74.1 | 290   | 811   | 1322  | 479   | 88.1 | 43.3 |
| MAX   | 39   | 60   | 48   | 59   | 127  | 108  | 515   | 1710  | 2060  | 828   | 150  | 57   |
| MIN   | 25   | 29   | 33   | 35   | 35   | 63   | 122   | 374   | 981   | 170   | 60   | 35   |
| AC-FT | 1800 | 2540 | 2440 | 2650 | 2840 | 4550 | 17270 | 49880 | 78670 | 29460 | 5410 | 2580 |
| CFSM  | 0.14 | 0.21 | 0.19 | 0.21 | 0.25 | 0.36 | 1.40  | 3.92  | 6.39  | 2.31  | 0.43 | 0.21 |
| IN.   | 0.16 | 0.23 | 0.22 | 0.24 | 0.26 | 0.41 | 1.56  | 4.52  | 7.13  | 2.67  | 0.49 | 0.23 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)

|      | 2001 | 2002 | 2001 | 2002 | 2001 | 2002 | 2001 | 2002 | 2001 | 2002 | 2001 | 2002 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 37.6 | 42.2 | 37.2 | 36.9 | 39.8 | 54.7 | 185  | 639  | 818  | 310  | 66.3 | 35.3 |
| MAX  | 46.0 | 42.6 | 39.6 | 43.1 | 51.1 | 74.1 | 290  | 811  | 1322 | 479  | 88.1 | 43.3 |
| (WY) | 2001 | 2002 | 2002 | 2002 | 2002 | 2002 | 2002 | 2002 | 2002 | 2002 | 2002 | 2002 |
| MIN  | 29.2 | 41.7 | 34.9 | 30.8 | 28.4 | 35.3 | 80.3 | 467  | 313  | 141  | 44.6 | 27.2 |
| (WY) | 2002 | 2001 | 2001 | 2001 | 2001 | 2001 | 2001 | 2001 | 2001 | 2001 | 2001 | 2001 |

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 2001 - 2002

|                          |       |        |      |        |      |        |      |  |  |        |  |      |
|--------------------------|-------|--------|------|--------|------|--------|------|--|--|--------|--|------|
| ANNUAL TOTAL             | 39085 | 100876 |      |        |      |        |      |  |  |        |  |      |
| ANNUAL MEAN              | 107   | 276    |      |        |      |        |      |  |  | 192    |  |      |
| HIGHEST ANNUAL MEAN      |       |        |      |        |      |        |      |  |  | 276    |  | 2002 |
| LOWEST ANNUAL MEAN       |       |        |      |        |      |        |      |  |  | 108    |  | 2001 |
| HIGHEST DAILY MEAN       | 1110  | May 24 | 2060 | Jun 15 | 2060 | Jun 15 | 2002 |  |  |        |  |      |
| LOWEST DAILY MEAN        | 24    | Sep 23 | 25   | Oct 4  | 24   | Sep 23 | 2001 |  |  |        |  |      |
| ANNUAL SEVEN-DAY MINIMUM | 25    | Sep 19 | 26   | Oct 2  | 25   | Sep 19 | 2001 |  |  |        |  |      |
| ANNUAL RUNOFF (AC-FT)    | 77530 | 200100 |      |        |      |        |      |  |  | 139200 |  |      |
| ANNUAL RUNOFF (CFSM)     | 0.52  | 1.34   |      |        |      |        |      |  |  | 0.93   |  |      |
| ANNUAL RUNOFF (INCHES)   | 7.02  | 18.13  |      |        |      |        |      |  |  | 12.62  |  |      |
| 10 PERCENT EXCEEDS       | 287   | 995    |      |        |      |        |      |  |  | 573    |  |      |
| 50 PERCENT EXCEEDS       | 39    | 64     |      |        |      |        |      |  |  | 46     |  |      |
| 90 PERCENT EXCEEDS       | 27    | 32     |      |        |      |        |      |  |  | 29     |  |      |

e Estimated