

REPUBLICAN RIVER BASIN

MEDICINE CREEK above Harry Strunk Lake, 06841000 - 1998

LOCATION.--SW1/4 Sec. 7-6-26 W., Frontier County, Lat. 40°30'10", Long. 100°19'20", on right bank 3.75 miles southeast of Stockville and 13.5 miles upstream from Medicine Creek Dam.

DRAINAGE AREA.--770 square miles, of which approximately 530 square miles contributes directly to surface runoff.

GAGE.--Continuous stage recorder. Datum of gage is 2,380.94 feet above National Geodetic Vertical Datum of 1929.

PERIOD OF RECORD.--1950 - present

REMARKS.--Published by U. S. Geological Survey up to Oct. 1, 1994. Records are good, except estimated records are poor.

EXTREMES FOR PERIOD OF RECORD.--Peak discharge 11,600 cubic feet per second June 21, 1967, gage height 20.05 feet; minimum daily discharge 9.1 cubic feet per second August 9, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharge 660 cubic feet per second May 22, gage height 10.92 feet; minimum daily discharge 19 cubic feet per second September 11-13.

DAILY DISCHARGE IN CUBIC FEET PER SECOND WATER YEAR OCT 1997 TO SEP 1998

| Day | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---------------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|
| 1 | 39 | 61 | 59 | 61 | 61 | 57 | 62 | 55 | 51 | 35 | 51 | 22 |
| 2 | 38 | 57 | 59 | 61 | 61 | 56 | 62 | 55 | 48 | 34 | 45 | 22 |
| 3 | 39 | 55 | 57 | 61 | 61 | 55 | 62 | 54 | 47 | 33 | 40 | 22 |
| 4 | 39 | 55 | 57 | 60 | 60 | 55 | 61 | 54 | 47 | 32 | 40 | 22 |
| 5 | 39 | 54 | 57 | 59 | 59 | 56 | 60 | 53 | 51 | 33 | 40 | 22 |
| 6 | 39 | 53 | 57 | 59 | 59 | 55 | 59 | 53 | 52 | 36 | 37 | 22 |
| 7 | 39 | 53 | 55 | 59 | 58 | 57 | 58 | 53 | 52 | 39 | 35 | 22 |
| 8 | 39 | 54 | 55 | 58E | 58 | 58 | 57 | 53 | 54 | 37 | 31 | 22 |
| 9 | 39 | 53 | 53 | 58E | 59 | 56 | 58 | 56 | 67 | 35 | 30 | 21 |
| 10 | 41 | 53 | 55 | 54E | 64 | 54E | 57 | 59 | 68 | 39 | 30 | 20 |
| 11 | 42 | 53 | 55 | 52E | 67 | 52E | 57 | 64 | 74 | 39 | 29 | 19 |
| 12 | 107 | 53 | 57 | 54E | 66 | 54 | 56 | 62 | 72 | 41 | 33 | 19 |
| 13 | 128 | 53 | 55 | 54E | 65 | 62 | 55 | 59 | 65 | 46 | 36 | 19 |
| 14 | 118 | 53 | 55 | 52E | 63 | 59 | 55 | 56 | 58 | 46 | 37 | 21 |
| 15 | 74 | 54 | 55 | 52E | 63 | 61 | 56 | 56 | 54 | 36 | 36 | 24 |
| 16 | 61 | 55 | 55 | 52E | 63 | 61 | 57 | 54 | 50 | 32 | 32 | 25 |
| 17 | 56 | 52 | 55 | 56E | 66 | 62 | 57 | 53 | 47 | 29 | 30 | 27 |
| 18 | 54 | 53 | 55 | 62E | 67 | 62 | 56 | 51 | 45 | 27 | 28 | 26 |
| 19 | 52 | 51 | 56 | 59 | 65 | 63 | 56 | 50 | 45 | 27 | 28 | 24 |
| 20 | 51 | 51 | 56 | 60 | 63 | 62 | 56 | 49 | 43 | 26 | 28 | 24 |
| 21 | 51 | 53 | 56 | 59 | 62 | 60 | 56 | 53 | 42 | 27 | 27 | 24 |
| 22 | 51 | 54 | 57 | 58 | 62 | 59 | 55 | 383 | 43 | 27 | 26 | 25 |
| 23 | 51 | 55 | 56 | 57 | 61 | 58 | 55 | 228 | 46 | 28 | 26 | 27 |
| 24 | 54 | 55 | 57 | 57 | 62 | 58 | 56 | 169 | 69 | 34 | 24 | 28 |
| 25 | 63 | 55 | 57 | 57 | 63 | 59 | 57 | 111 | 75 | 38 | 23 | 28 |
| 26 | 80 | 56 | 56 | 57 | 59 | 59 | 57 | 86 | 54 | 39 | 24 | 27 |
| 27 | 74 | 57 | 58 | 58 | 59 | 60 | 59 | 67 | 46 | 39 | 25 | 27 |
| 28 | 69 | 58 | 57 | 59 | 58 | 60 | 57 | 58 | 40 | 36 | 23 | 27 |
| 29 | 68 | 61 | 57 | 60 | ----- | 64 | 56 | 55 | 38 | 34 | 22 | 27 |
| 30 | 68 | 60 | 58 | 62 | ----- | 67 | 56 | 53 | 36 | 85 | 22 | 28 |
| 31 | 66 | ----- | 59 | 62 | ----- | 66 | ----- | 53 | ----- | 62 | 21 | ----- |
| TOTAL | 1,829 | 1,640 | 1,746 | 1,789 | 1,734 | 1,827 | 1,721 | 2,415 | 1,579 | 1,151 | 959 | 713 |
| MEAN | 59.0 | 54.7 | 56.3 | 57.7 | 61.9 | 58.9 | 57.4 | 77.9 | 52.6 | 37.1 | 30.9 | 23.8 |
| MAX | 128 | 61 | 59 | 62 | 67 | 67 | 62 | 383 | 75 | 85 | 51 | 28 |
| MIN | 38 | 51 | 53 | 52 | 58 | 52 | 55 | 49 | 36 | 26 | 21 | 19 |
| AC-FT | 3,630 | 3,250 | 3,460 | 3,550 | 3,440 | 3,620 | 3,410 | 4,790 | 3,130 | 2,280 | 1,900 | 1,410 |
| CAL YEAR 1997 TOTAL | | 20,426 | MEAN | 56.0 | MAX | 797 | MIN | 32 | AC-FT | 40,510 | | |
| WTR YEAR 1998 TOTAL | | 19,103 | MEAN | 52.3 | MAX | 383 | MIN | 19 | AC-FT | 37,890 | | |

E indicates estimated discharge.

REPUBLICAN RIVER BASIN

MEDICINE CREEK below Harry Strunk Lake, 06842500 - 1998

LOCATION.--Center of Sec. 25-5-26 W., Frontier County, Latitude 40° 22' 20", Longitude 100° 13' 20", On left bank 0.5 mile downstream from Medicine Creek Dam and 6.5 miles northwest of Cambridge.

DRAINAGE AREA.--880 square miles, of which 640 square miles contributes directly to surface runoff. This drainage controlled by Medicine Creek Dam 1/2 mile upstream.

GAGE.--Continuous stage recorder. Datum of gage is 2295.26 feet National Geodetic Vertical Datum of 1929 (U.S.B.R. benchmark).

PERIOD OF RECORD.--1949 - present (Monthly discharge only for some periods, published in USGS WSP 1730).

REMARKS.--Published by U. S. Geological Survey up to Oct. 1, 1994. Records above 10 cubic feet per second are good, records from 5 to 10 cubic feet per second are fair, estimated records and records below 5 cubic feet per second are poor.

EXTREMES FOR PERIOD OF RECORD.--Peak discharge 1,300 cubic feet per second March 23, 1960, gage height 5.97 ft.
No flow September 11, 1990.

EXTREMES FOR CURRENT YEAR.--Peak discharge 366 cubic feet per second July 20, gage height 2.85 feet; minimum daily discharge 0.17 cubic feet per second September 12.

DAILY DISCHARGE IN CUBIC FEET PER SECOND WATER YEAR OCT 1997 TO SEP 1998

| Day | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---------------------|-------|-----------|-------|-------|-------|--------|---------|-------|-------|--------|-------|--------|
| 1 | .36 | .30 | .41 | .49 | .38 | .45 | 54 | 2.0 | 93 | 265 | 30 | 126 |
| 2 | .34 | .31 | .49 | .49 | .38 | .38 | 53 | 2.0 | 62 | 254 | 30 | 117 |
| 3 | .30 | .32 | .50 | .43 | .38 | .44 | 54 | 2.0 | 53 | 235E | 30 | 102 |
| 4 | .37 | .38 | .49 | .38 | .38 | .42 | 54 | 2.0 | 51 | 235E | 30 | 39 |
| 5 | .35 | .32 | .49 | .38 | .49 | .44 | 54 | 1.6 | 28 | 215E | 30 | .22 |
| 6 | .38 | .38 | .49 | .38 | .51 | .42 | 54 | 1.8 | 15 | 230E | 31 | .20 |
| 7 | .34 | .38 | .49 | .38 | .66 | 1.1 | 54 | 2.0 | 18 | 250E | 31 | .27 |
| 8 | .40 | .36 | .49 | .38 | .66 | .75 | 54 | 2.2 | 19 | 235E | 31 | .35 |
| 9 | .39 | .38 | .66 | .46 | .95 | .49 | 52 | 2.8 | 21 | 169 | 42 | .40 |
| 10 | .49 | .32 | .66 | .46 | .99 | .38 | 52 | 2.7 | 92 | 78 | 147 | .24 |
| 11 | .41 | .40 | .66 | .49 | .67 | .25 | 52 | 3.6 | 97 | 36 | 222 | .19 |
| 12 | 1.1 | .64 | .66 | .44 | .63 | .27 | 52 | 3.4 | 95 | 34 | 217 | .17 |
| 13 | .36 | .78 | .66 | .32 | .66 | .40 | 52 | 4.5 | 95 | 34 | 192 | .17 |
| 14 | .45 | .65 | .66 | .33 | .66 | .72 | 52 | 5.7 | 94 | 40 | 192 | .31 |
| 15 | .38 | .66 | .66 | .38 | .46 | 1.1 | 52 | 9.7 | 91 | 88 | 192 | .33 |
| 16 | .48 | .52 | .66 | .42 | .49 | 1.5 | 53 | 12 | 116 | 174 | 225E | .26 |
| 17 | .30 | .49 | .66 | .38 | .58 | 2.4 | 54 | 12 | 143 | 254 | 280E | .24 |
| 18 | .23 | .49 | .66 | .38 | .42 | 2.9 | 54 | 14 | 160E | 267 | 280E | 1.2 |
| 19 | .24 | .44 | .66 | .40 | .49 | 3.0 | 53 | 15 | 190E | 284 | 283 | 1.4 |
| 20 | .25 | .49 | .66 | .37 | .39 | 22 | 53 | 17 | 195E | 360 | 280 | 1.4 |
| 21 | .42 | .49 | .66 | .30 | .43 | 31 | 54 | 21 | 200E | 363 | 248 | 1.3 |
| 22 | .35 | .49 | .66 | .29 | .40 | 31 | 21 | 29 | 220E | 350 | 223 | 1.4 |
| 23 | .36 | .49 | .66 | .32 | .30 | 31 | 2.0 | 41 | 245E | 317 | 222 | 1.8 |
| 24 | 1.1 | .49 | .66 | .38 | .41 | 31 | 1.9 | 46 | 251 | 183 | 217 | 1.5 |
| 25 | .55 | .42 | .66 | .38 | .31 | 45 | 1.7 | 50 | 252 | 158 | 217 | 1.4 |
| 26 | .30 | .49 | .71 | .38 | .25 | 54 | 2.0 | 66 | 251 | 121 | 200 | 1.8 |
| 27 | .30 | .47 | .84 | .38 | .27 | 54 | 2.4 | 74 | 252 | 65 | 171 | 1.7 |
| 28 | .30 | .59 | .66 | .38 | .31 | 54 | 2.2 | 97 | 253 | 33 | 160 | 1.9 |
| 29 | .24 | .71 | .66 | .38 | ----- | 54 | 2.3 | 106 | 215E | 30 | 160 | 2.2 |
| 30 | .24 | .46 | .61 | .38 | ----- | 54 | 2.0 | 102 | 230E | 30 | 157 | 13 |
| 31 | .27 | ----- | .49 | .38 | ----- | 54 | ----- | 97 | ----- | 30 | 140 | ----- |
| TOTAL | 12.35 | 14.11 | 19.04 | 12.09 | 13.91 | 532.81 | 1,153.5 | 847.0 | 4,097 | 5,417 | 4,910 | 419.35 |
| MEAN | .40 | .47 | .61 | .39 | .50 | 17.2 | 38.5 | 27.3 | 137 | 175 | 158 | 14.0 |
| MAX | 1.1 | .78 | .84 | .49 | .99 | 54 | 54 | 106 | 253 | 363 | 283 | 126 |
| MIN | .23 | .30 | .41 | .29 | .25 | .25 | 1.7 | 1.6 | 15 | 30 | 30 | .17 |
| AC-FT | 24 | 28 | 38 | 24 | 28 | 1,060 | 2,290 | 1,680 | 8,130 | 10,740 | 9,740 | 832 |
| CAL YEAR 1997 TOTAL | | 21,843.78 | MEAN | 59.8 | MAX | 348 | MIN | .16 | AC-FT | 43,330 | | |
| WTR YEAR 1998 TOTAL | | 17,448.16 | MEAN | 47.8 | MAX | 363 | MIN | .17 | AC-FT | 34,610 | | |

E indicates estimated daily discharge.