

REPUBLICAN RIVER BASIN

MEDICINE CREEK above Harry Strunk Lake, 06841000

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 discharges above 125 cubic feet per second are fair and 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 7.1 cubic feet per second August 8, 2002.

EXTREMES FOR CURRENT YEAR.--Peak discharge 519 cubic feet per second June 3, gage height 10.10 feet; minimum daily discharge 13 cubic feet per second August 4.

DISCHARGE (CFS), WATER YEAR 2005

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------|-------|------|-------|------|------|------|-------|------|------|-------|-------|------|
| 1 | 26 | 30 | 39e | 43 | 43 | 42 | 59 | 45 | 40 | 37 | 16 | 25 |
| 2 | 26 | 30 | 37e | 43 | 45 | 41 | 53 | 44 | 66 | 34 | 15 | 24 |
| 3 | 26 | 31 | 40e | 42e | 44 | 41 | 50 | 43 | 391 | 33 | 14 | 24 |
| 4 | 25 | 31 | 41e | 35e | 44 | 42 | 49 | 42 | 313 | 32 | 13 | 22 |
| 5 | 25 | 32 | 41e | 29e | 45 | 42 | 48 | 41 | 217 | 32 | 14 | 23 |
| 6 | 27 | 32 | 41 | 25e | 44 | 42 | 46 | 41 | 139 | 31 | 14 | 22 |
| 7 | 28 | 32 | 41 | 23e | 43 | 42 | 46 | 43 | 114 | 30 | 15 | 22 |
| 8 | 29 | 33 | 42 | 20e | 42e | 42e | 45 | 41 | 91 | 30 | 17 | 22 |
| 9 | 29 | 33 | 41 | 22e | 41e | 43e | 44 | 39 | 65 | 29 | 17 | 21 |
| 10 | 29 | 35 | 41 | 23e | 41e | 43e | 44 | 38 | 57 | 27 | 24 | 21 |
| 11 | 29 | 35 | 41 | 25e | 40e | 42e | 45 | 37 | 56 | 27 | 19 | 21 |
| 12 | 28 | 35 | 41 | 26e | 41e | 42e | 46 | 214 | 54 | 29 | 22 | 21 |
| 13 | 27 | 35 | 41 | 21e | 41e | 44e | 47 | 349 | 57 | 27 | 30 | 21 |
| 14 | 26 | 35 | 43 | 16e | 42e | 43e | 47 | 163 | 59 | 28 | 33 | 21 |
| 15 | 27 | 36 | 40 | 19e | 42e | 42 | 46 | 82 | 61 | 28 | 31 | 22 |
| 16 | 27 | 36 | 40 | 18e | 43e | 42 | 45 | 63 | 57 | 27 | 29 | 22 |
| 17 | 28 | 37 | 40 | 19e | 43e | 42 | 44 | 53 | 56 | 26 | 29 | 21 |
| 18 | 29 | 40 | 41 | 23e | 42 | 42 | 44 | 48 | 51 | 25 | 28 | 21 |
| 19 | 54 | 41 | 41 | 24e | 42 | 41 | 44 | 45 | 45 | 24 | 28 | 22 |
| 20 | 38 | 44 | 41 | 34e | 42 | 42 | 43 | 43 | 43 | 23 | 27 | 22 |
| 21 | 37 | 43 | 41e | 31e | 43 | 45 | 44 | 41 | 42 | 21 | 27 | 22 |
| 22 | 35 | 42 | 37e | 29e | 43 | 49 | 47 | 39 | 43 | 21 | 30 | 21 |
| 23 | 33 | 41 | 34e | 33e | 44 | 55 | 59 | 37 | 42 | 18 | 27 | 21 |
| 24 | 32 | 39 | 29e | 40e | 44 | 53 | 54 | 36 | 39 | 18 | 27 | 21 |
| 25 | 31 | 39 | 29e | 46 | 44 | 51 | 50 | 36 | 37 | 18 | 26 | 22 |
| 26 | 30 | 39 | 32e | 46 | 43 | 49 | 47 | 35 | 36 | 19 | 28 | 23 |
| 27 | 30 | 39 | 37e | 45 | 43 | 47 | 46 | 34 | 36 | 19 | 47 | 23 |
| 28 | 30 | 40 | 38e | 45 | 42 | 46 | 45 | 35 | 39 | 18 | 32 | 22 |
| 29 | 31 | 40 | 40e | 43 | --- | 46 | 44 | 34 | 53 | 18 | 33 | 22 |
| 30 | 31 | 41e | 42 | 43 | --- | 53 | 46 | 35 | 45 | 17 | 27 | 23 |
| 31 | 30 | --- | 42 | 43 | --- | 61 | --- | 38 | --- | 16 | 26 | --- |
| TOTAL | 933 | 1096 | 1214 | 974 | 1196 | 1397 | 1417 | 1914 | 2444 | 782 | 765 | 660 |
| MEAN | 30.0 | 36.5 | 39.1 | 31.3 | 42.7 | 45.0 | 47.2 | 61.7 | 81.5 | 25.2 | 24.6 | 21.9 |
| MAX | 54 | 44 | 43 | 46 | 45 | 61 | 59 | 349 | 391 | 37 | 47 | 25 |
| MIN | 25 | 30 | 29 | 16 | 40 | 41 | 43 | 34 | 36 | 16 | 13 | 21 |
| AC-FT | 1851 | 2174 | 2408 | 1932 | 2372 | 2771 | 2811 | 3796 | 4848 | 1551 | 1517 | 1309 |
| CAL YEAR 2004 | TOTAL | | 12645 | MEAN | 34.5 | MAX | 102.0 | MIN | 17.0 | AC-FT | 25080 | |
| WTR YEAR 2005 | TOTAL | | 14792 | MEAN | 40.5 | MAX | 391.0 | MIN | 13.0 | AC-FT | 29340 | |

e indicates estimated discharge.

REPUBLICAN RIVER BASIN

MEDICINE CREEK below Harry Strunk Lake, 06842500

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 WSP 1730).

REMARKS.--Published by U. S. Geological Survey up to Oct. 1, 1994. Records above 10 cubic feet per
second are good, records between 4 and 10 cubic feet per second are fair, records below 4 cubic
feet per second and estimated records 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 224 cubic feet per second August 4, gage height 3.07 feet;
minimum daily discharge 0.18 cubic feet per second September 19 & 20.

DISCHARGE (CFS), WATER YEAR 2005

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------|-------|------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|
| 1 | 3.1 | 0.24 | 0.28 | 0.42 | 0.45 | 0.38 | 0.74 | 0.48 | 0.46 | 143 | 183 | 1.1 |
| 2 | 2.9 | 0.24 | 0.28 | 0.40 | 0.44 | 0.38 | 0.67 | 0.45 | 0.65 | 148 | 209 | 0.60 |
| 3 | 3.0 | 0.36 | 0.28 | 0.41 | 0.43 | 0.37 | 0.67 | 0.43 | 1.3 | 157 | 223 | 0.71 |
| 4 | 2.7 | 0.43 | 0.29 | 0.44 | 0.42 | 0.36 | 0.65 | 0.42 | 1.0 | 169 | 219 | 1.1 |
| 5 | 0.88 | 0.31 | 0.31 | 0.45 | 0.42 | 0.36 | 0.64 | 0.48 | 1.1 | 163 | 174 | 1.4 |
| 6 | 0.70 | 0.33 | 0.32 | 0.45 | 0.42 | 0.54 | 0.66 | 0.69 | 0.78 | 161 | 167 | 1.8 |
| 7 | 0.60 | 0.30 | 0.32 | 0.44 | 0.40 | 0.63 | 0.61 | 1.2 | 0.87 | 160 | 164 | 2.1 |
| 8 | 0.48 | 0.26 | 0.32 | 0.42 | 0.39 | 0.46 | 0.61 | 1.6 | 1.5 | 161 | 167 | 2.4 |
| 9 | 0.56 | 0.25 | 0.34 | 0.42 | 0.39 | 0.40 | 0.75 | 1.4 | 3.0 | 170 | 178 | 2.6 |
| 10 | 0.74 | 0.31 | 0.33 | 0.43 | 0.37 | 0.40 | 1.2 | 0.73 | 4.7 | 180 | 183 | 2.7 |
| 11 | 1.0 | 0.33 | 0.34 | 0.42 | 0.35 | 0.41 | 1.5 | 0.44 | 6.8 | 192 | 180 | 2.7 |
| 12 | 0.91 | 0.31 | 0.36 | 0.41 | 0.36 | 0.51 | 0.92 | 0.39 | 9.4 | 196 | 144 | 1.6 |
| 13 | 0.37 | 0.32 | 0.35 | 0.40 | 0.42 | 0.78 | 0.65 | 0.53 | 12 | 202 | 124 | 1.1 |
| 14 | 0.24 | 0.37 | 0.36 | 0.38 | 0.38 | 0.84 | 0.66 | 0.97 | 10 | 194 | 119 | 0.54 |
| 15 | 0.22 | 0.49 | 0.37 | 0.37 | 0.36 | 0.48 | 0.74 | 0.69 | 11 | 178 | 112 | 0.39 |
| 16 | 0.24 | 0.37 | 0.38 | 0.37 | 0.36 | 0.38 | 0.69 | 0.77 | 13 | 180 | 110 | 0.30 |
| 17 | 0.38 | 0.32 | 0.39 | 0.39 | 0.35 | 0.39 | 0.71 | 0.52 | 14 | 178 | 86 | 0.24 |
| 18 | 0.60 | 0.55 | 0.41 | 0.39 | 0.34 | 0.37 | 0.81 | 0.33 | 15 | 178 | 63 | 0.21 |
| 19 | 0.70 | 0.52 | 0.40 | 0.42 | 0.36 | 0.45 | 0.64 | 0.23 | 13 | 177 | 67 | 0.18 |
| 20 | 0.66 | 0.38 | 0.42 | 0.44 | 0.37 | 0.87 | 0.56 | 0.22 | 13 | 189 | 72 | 0.18 |
| 21 | 1.1 | 0.32 | 0.40 | 0.46 | 0.37 | 1.5 | 0.54 | 0.37 | 15 | 190 | 81 | 0.21 |
| 22 | 1.4 | 0.29 | 0.39 | 0.44 | 0.37 | 1.2 | 0.50 | 0.52 | 15 | 147 | 108 | 0.24 |
| 23 | 1.7 | 0.29 | 0.38 | 0.41 | 0.37 | 0.73 | 0.46 | 0.53 | 15 | 158 | 104 | 1.5 |
| 24 | 1.9 | 0.28 | 0.39 | 0.44 | 0.37 | 0.63 | 0.58 | 0.33 | 15 | 164 | 107 | 4.8 |
| 25 | 0.89 | 0.28 | 0.41 | 0.44 | 0.41 | 0.52 | 0.71 | 0.30 | 15 | 192 | 112 | 6.9 |
| 26 | 0.36 | 0.29 | 0.41 | 0.43 | 0.39 | 0.49 | 0.55 | 0.27 | 15 | 169 | 92 | 1.1 |
| 27 | 0.27 | 0.29 | 0.42 | 0.44 | 0.39 | 0.48 | 0.47 | 0.28 | 51 | 154 | 94 | 2.0 |
| 28 | 0.28 | 0.33 | 0.43 | 0.45 | 0.39 | 0.53 | 0.59 | 0.28 | 115 | 154 | 105 | 0.54 |
| 29 | 0.28 | 0.33 | 0.44 | 0.45 | --- | 0.55 | 0.61 | 0.30 | 134 | 126 | 132 | 2.1 |
| 30 | 0.24 | 0.29 | 0.45 | 0.45 | --- | 1.4 | 0.53 | 0.32 | 146 | 131 | 129 | 2.2 |
| 31 | 0.25 | --- | 0.43 | 0.46 | --- | 1.0 | --- | 0.55 | --- | 141 | 13 | --- |
| TOTAL | 29.65 | 9.98 | 11.4 | 13.14 | 10.84 | 18.79 | 20.62 | 17.02 | 668.56 | 5202 | 4021 | 45.54 |
| MEAN | 0.95 | 0.33 | 0.37 | 0.42 | 0.39 | 0.61 | 0.68 | 0.55 | 22.4 | 167.8 | 129.8 | 1.5 |
| MAX | 3.1 | 0.55 | 0.45 | 0.46 | 0.45 | 1.5 | 1.5 | 1.6 | 146 | 202 | 223 | 6.9 |
| MIN | 0.22 | 0.24 | 0.28 | 0.37 | 0.34 | 0.36 | 0.46 | 0.22 | 0.46 | 126 | 13 | 0.18 |
| AC-FT | 59 | 20 | 23 | 26 | 22 | 37 | 41 | 34 | 1326 | 10320 | 7976 | 90 |
| CAL YEAR 2004 | TOTAL | | 11735 | MEAN | 32.1 | MAX | 220.0 | MIN | 0.020 | AC-FT | 23280 | |
| WTR YEAR 2005 | TOTAL | | 10069 | MEAN | 27.6 | MAX | 223.0 | MIN | 0.18 | AC-FT | 19970 | |