

02020500 CALFPASTURE RIVER ABOVE MILL CREEK, AT GOSHEN, VA

LOCATION.--Lat 37°59'16", long 79°29'38", Rockbridge County, Hydrologic Unit 02080202, on left bank 20 ft upstream from bridge on State Highway 42, at Goshen adn 400 ft upstream from Mill Creek.

DRAINAGE AREA.--144 mi².

PERIOD OF RECORD.--October 1938 to September 1996. October 1998 to current year. Monthly discharge only for some periods, published in WSP 1303.

REVISED RECORDS.--WSP 2104: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,382.84 ft above sea level. Prior to Oct. 1, 1998, at datum 2.0 ft higher.

REMARKS.--Records good except those for period of no gage-height record, Oct. 1 and Dec. 8, and period with ice effect Jan. 1-11, which is fair. Virginia Department of EMergency Services gage-height radio transmitter at station. Maximum discharge, 56,300 ft³/s, from rating curve extended above 9,200 ft³/s on basis of slope-area measurement at gage heights 12.78 ft and 20.23 ft. No flow Sep. 5, 6, 1957, Sep. 28, 1959, result of diversion. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

COOPERATION.--Records were provided by the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s and maximum (*):

| Date | Time | Discharge (ft ³ /s) | Gage height (ft) | Date | Time | Discharge (ft ³ /s) | Gage height (ft) |
|--------|------|--------------------------------|------------------|--------------------------------------|------|--------------------------------|------------------|
| Jan 24 | 1415 | *1,860 | *5.97 | No peak greater than base discharge. | | | |

Minimum discharge, 1.3 ft³/s, Sep 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|-------|-------|--------|------|------|------|------|-------|-------|------|--------|
| 1 | e3.5 | 5.6 | 5.9 | e8.5 | 94 | 81 | 117 | 42 | 31 | 7.1 | 4.2 | 1.9 |
| 2 | 3.0 | 5.9 | 5.5 | e7.8 | 199 | 74 | 116 | 41 | 28 | 6.9 | 3.2 | 1.7 |
| 3 | 3.3 | 7.6 | 5.5 | e43 | 336 | 81 | 104 | 39 | 27 | 6.2 | 2.6 | 1.5 |
| 4 | 3.8 | 8.8 | 5.7 | e80 | 267 | 181 | 98 | 39 | 24 | 5.3 | 2.6 | 1.7 |
| 5 | 4.2 | 8.2 | 5.7 | e60 | 207 | 200 | 91 | 38 | 21 | 4.2 | 2.4 | 1.0 |
| 6 | 4.6 | 6.9 | 6.0 | e44 | 164 | 196 | 84 | 38 | 20 | 3.8 | 2.2 | 336 |
| 7 | 5.2 | 6.5 | 6.1 | e34 | 147 | 197 | 79 | 39 | 18 | 4.3 | 2.0 | 342 |
| 8 | 25 | 6.5 | e8.0 | e36 | 152 | 182 | 73 | 216 | 16 | 3.5 | 2.0 | 171 |
| 9 | 17 | 6.5 | 18 | e38 | 136 | 175 | 71 | 271 | 15 | 3.3 | 2.3 | 100 |
| 10 | 9.4 | 6.5 | 12 | e76 | 129 | 168 | 69 | 205 | 14 | 3.8 | 2.3 | 66 |
| 11 | 7.3 | 7.8 | 8.4 | e70 | 118 | 147 | 69 | 159 | 15 | 3.2 | 2.1 | 46 |
| 12 | 6.6 | 7.6 | 7.4 | 64 | 109 | 135 | 65 | 128 | 14 | 4.3 | 1.7 | 35 |
| 13 | 6.2 | 7.6 | 11 | 71 | 102 | 126 | 59 | 129 | 12 | 5.0 | 1.6 | 29 |
| 14 | 5.9 | 6.7 | 14 | 124 | 89 | 136 | 54 | 808 | 12 | 5.2 | 2.0 | 24 |
| 15 | 5.5 | 6.4 | 11 | 435 | 80 | 214 | 53 | 577 | 11 | 4.6 | 2.1 | 21 |
| 16 | 5.7 | 6.6 | 9.9 | 394 | 73 | 282 | 55 | 404 | 10 | 4.4 | 2.4 | 20 |
| 17 | 5.8 | 6.5 | 9.6 | 229 | 70 | 663 | 51 | 283 | 11 | 3.7 | 2.1 | 18 |
| 18 | 6.0 | 5.9 | 8.8 | 175 | 166 | 1110 | 49 | 213 | 11 | 3.4 | 1.7 | 16 |
| 19 | 5.9 | 5.8 | 8.6 | 232 | 296 | 839 | 47 | 172 | 9.6 | 3.2 | 1.7 | 14 |
| 20 | 5.6 | 6.1 | 8.3 | 205 | 255 | 535 | 46 | 136 | 10 | 3.8 | 4.2 | 14 |
| 21 | 5.4 | 6.3 | 8.1 | 159 | 205 | 467 | 44 | 109 | 10 | 4.2 | 4.8 | 24 |
| 22 | 5.1 | 6.1 | 8.0 | 149 | 166 | 601 | 44 | 92 | 9.7 | 4.7 | 4.5 | 17 |
| 23 | 4.7 | 6.0 | 7.8 | 167 | 138 | 506 | 43 | 94 | 8.8 | 3.9 | 3.4 | 14 |
| 24 | 5.3 | 6.0 | 8.0 | 1290 | 119 | 390 | 43 | 87 | 8.1 | 5.0 | 3.2 | 12 |
| 25 | 5.9 | 6.1 | 7.7 | 923 | 105 | 311 | 41 | 77 | 7.5 | 5.4 | 3.4 | 11 |
| 26 | 6.6 | 7.1 | 7.4 | 464 | 95 | 258 | 40 | 67 | 7.4 | 3.8 | 3.6 | 10 |
| 27 | 8.2 | 6.7 | 7.0 | 295 | 85 | 216 | 39 | 58 | 7.0 | 3.6 | 3.4 | 10 |
| 28 | 6.2 | 6.7 | 7.4 | 215 | 84 | 184 | 44 | 50 | 6.8 | 5.9 | 3.3 | 14 |
| 29 | 5.6 | 6.1 | 7.6 | 164 | --- | 158 | 45 | 44 | 6.6 | 9.4 | 3.0 | 17 |
| 30 | 4.7 | 6.1 | 7.7 | 129 | --- | 136 | 43 | 38 | 6.9 | 4.9 | 2.5 | 339 |
| 31 | 5.3 | --- | 7.8 | 105 | --- | 116 | --- | 34 | --- | 4.0 | 2.1 | --- |
| TOTAL | 202.5 | 199.2 | 259.9 | 6486.3 | 4186 | 9065 | 1876 | 4727 | 408.4 | 144.0 | 84.6 | 1736.8 |
| MEAN | 6.53 | 6.64 | 8.38 | 209 | 150 | 292 | 62.5 | 152 | 13.6 | 4.65 | 2.73 | 57.9 |
| MAX | 25 | 8.8 | 18 | 1290 | 336 | 1110 | 117 | 808 | 31 | 9.4 | 4.8 | 342 |
| MIN | 3.0 | 5.6 | 5.5 | 7.8 | 70 | 74 | 39 | 34 | 6.6 | 3.2 | 1.6 | 1.5 |
| CFSM | .05 | .05 | .06 | 1.45 | 1.04 | 2.03 | .43 | 1.06 | .09 | .03 | .02 | .40 |
| IN. | .05 | .05 | .07 | 1.68 | 1.08 | 2.34 | .48 | 1.22 | .11 | .04 | .02 | .45 |

02020500 CALFPASTURE RIVER ABOVE MILL CREEK, AT GOSHEN, VA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1996, 1999, BY WATER YEAR (WY)

| | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 75.3 | 125 | 188 | 233 | 265 | 362 | 263 | 221 | 134 | 47.6 | 57.8 | 60.0 |
| MAX | 469 | 1540 | 768 | 931 | 651 | 849 | 992 | 638 | 600 | 352 | 458 | 799 |
| (WY) | 1977 | 1986 | 1974 | 1996 | 1994 | 1993 | 1987 | 1942 | 1982 | 1972 | 1940 | 1996 |
| MIN | 3.90 | 6.21 | 8.38 | 7.82 | 47.7 | 50.9 | 47.3 | 29.0 | 10.2 | 3.77 | 2.73 | 2.08 |
| (WY) | 1942 | 1942 | 1999 | 1981 | 1977 | 1981 | 1995 | 1977 | 1964 | 1966 | 1999 | 1970 |

SUMMARY STATISTICS

FOR 1999 WATER YEAR

WATER YEARS 1939 - 1996
1999

| | | | |
|--------------------------|---------|---------|-------|
| ANNUAL TOTAL | 29375.7 | | |
| ANNUAL MEAN | 80.5 | | |
| HIGHEST ANNUAL MEAN | | 169 | |
| LOWEST ANNUAL MEAN | | 303 | 1973 |
| HIGHEST DAILY MEAN | | 65.3 | 1956 |
| LOWEST DAILY MEAN | 1290 | Jan 24 | 21900 |
| ANNUAL SEVEN-DAY MINIMUM | 1.5 | Sep 3 | a.00 |
| INSTANTANEOUS PEAK FLOW | 1.9 | cAug 12 | .93 |
| INSTANTANEOUS PEAK STAGE | 1860 | Jan 24 | 56300 |
| INSTANTANEOUS LOW FLOW | 5.97 | Jan 24 | 20.23 |
| ANNUAL RUNOFF (CFSM) | 1.3 | Sep 3 | a.00 |
| ANNUAL RUNOFF (INCHES) | .56 | | 1.17 |
| 10 PERCENT EXCEEDS | 7.59 | | 15.93 |
| 50 PERCENT EXCEEDS | 209 | | 376 |
| 90 PERCENT EXCEEDS | 14 | | 63 |
| | 3.5 | | 7.6 |

- a Result of diversion.
- b Also Sep 6, 1957 and Sep 28, 1959.
- c Also Aug 13, 1999.
- e Estimated.

