

02022500 KERRS CREEK NEAR LEXINGTON, VA

LOCATION.--Lat 37°49'32", long 79°26'36", Rockbridge County, Hydrologic Unit 02080202, on right bank 100 ft upstream from bridge on Interstate Highway 64, 1.4 mi upstream from mouth, and 2.9 mi north of Lexington.

DRAINAGE AREA.--35.0 mi².

PERIOD OF RECORD.--October 1926 to current year. Monthly discharge only for some periods, published in WSP 1303.

REVISED RECORDS.--WSP 1203: 1927-29, 1930-34(M), 1935-40, 1941(M), 1942, 1943-48(M), 1949. WSP 2104: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 980.32 ft above sea level (levels by U.S. Army Corps of Engineers). Jan. 27, 1927, to Sept. 30, 1953, nonrecording gage at site 1,000 ft downstream at different datum.

REMARKS.--Records good except for period with ice effect, Jan. 6, 7, which is fair. Maximum discharge, 23,000 ft³/s, from rating curve extended above 800 ft³/s on basis of contracted-opening and slope-area measurements of peak flow. Minimum discharge, 0.90 ft³/s, July 22, 1966, result of temporary dam upstream. 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 600 ft³/s and maximum (*):

| Date | Time | Discharge (ft ³ /s) | Gage height (ft) | Date | Time | Discharge (ft ³ /s) | Gage height (ft) |
|--------|------|--------------------------------|------------------|--------------------------------------|------|--------------------------------|------------------|
| Mar 17 | 1845 | *254 | *4.47 | No peak greater than base discharge. | | | |

Minimum discharge, 3.6 ft³/s, Aug 17-19, 31, Sep 1, 2, 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 | 6.3 | 7.7 | 6.7 | 5.0 | 11 | 9.3 | 26 | 13 | 9.0 | 7.1 | 4.7 | 3.8 |
| 2 | 6.3 | 7.6 | 6.8 | 5.0 | 38 | 8.7 | 22 | 12 | 9.4 | 6.9 | 4.5 | 3.8 |
| 3 | 6.5 | 9.7 | 6.7 | 30 | 33 | 9.9 | 19 | 12 | 9.6 | 6.3 | 4.3 | 3.7 |
| 4 | 7.1 | 9.7 | 6.5 | 14 | 25 | 24 | 19 | 12 | 8.7 | 6.1 | 4.2 | 4.1 |
| 5 | 7.1 | 8.6 | 6.5 | 7.9 | 18 | 14 | 17 | 11 | 8.4 | 5.8 | 4.3 | 15 |
| 6 | 7.5 | 8.4 | 6.5 | e6.3 | 15 | 13 | 16 | 11 | 8.3 | 5.7 | 4.1 | 12 |
| 7 | 7.8 | 8.1 | 6.0 | e5.9 | 14 | 12 | 15 | 11 | 8.0 | 6.5 | 4.1 | 7.9 |
| 8 | 18 | 8.4 | 6.3 | 6.5 | 14 | 10 | 14 | 38 | 7.7 | 7.6 | 4.2 | 6.0 |
| 9 | 9.5 | 8.4 | 8.4 | 8.0 | 12 | 11 | 14 | 26 | 7.6 | 6.3 | 4.3 | 5.6 |
| 10 | 7.8 | 8.4 | 6.1 | 9.2 | 10 | 12 | 13 | 20 | 7.4 | 6.3 | 4.2 | 5.1 |
| 11 | 7.5 | 11 | 5.4 | 7.5 | 9.6 | 12 | 17 | 17 | 7.5 | 6.0 | 4.0 | 4.6 |
| 12 | 7.5 | 9.4 | 5.3 | 7.3 | 9.5 | 11 | 15 | 15 | 7.6 | 7.1 | 3.9 | 4.5 |
| 13 | 7.5 | 8.7 | 8.2 | 9.3 | 9.1 | 10 | 14 | 16 | 7.3 | 7.5 | 3.9 | 4.4 |
| 14 | 7.1 | 8.3 | 7.8 | 13 | 8.4 | 16 | 13 | 74 | 7.3 | 6.8 | 4.3 | 4.4 |
| 15 | 7.0 | 8.2 | 6.1 | 41 | 8.2 | 49 | 16 | 69 | 7.1 | 6.5 | 4.0 | 4.6 |
| 16 | 6.9 | 8.1 | 5.7 | 22 | 7.9 | 72 | 16 | 45 | 7.1 | 6.3 | 4.0 | 5.6 |
| 17 | 6.9 | 7.7 | 5.4 | 13 | 8.1 | 142 | 14 | 36 | 8.7 | 6.1 | 3.8 | 4.9 |
| 18 | 6.8 | 7.6 | 5.3 | 14 | 36 | 143 | 13 | 29 | 7.8 | 5.9 | 3.8 | 4.4 |
| 19 | 6.9 | 7.6 | 5.1 | 13 | 38 | 89 | 13 | 24 | 7.2 | 5.7 | 4.0 | 4.4 |
| 20 | 6.9 | 7.8 | 5.1 | 11 | 29 | 60 | 13 | 19 | 7.4 | 5.6 | 5.8 | 6.8 |
| 21 | 6.6 | 7.6 | 5.1 | 9.3 | 21 | 81 | 13 | 16 | 7.7 | 5.6 | 4.8 | 11 |
| 22 | 6.9 | 7.3 | 5.1 | 8.6 | 17 | 82 | 13 | 15 | 7.4 | 5.7 | 4.3 | 6.9 |
| 23 | 7.3 | 7.4 | 4.9 | 12 | 14 | 61 | 12 | 15 | 7.1 | 5.6 | 4.4 | 5.6 |
| 24 | 7.2 | 7.3 | 5.4 | 104 | 12 | 51 | 13 | 17 | 6.8 | 6.4 | 4.4 | 5.1 |
| 25 | 7.5 | 7.0 | 5.1 | 52 | 11 | 44 | 12 | 13 | 6.6 | 8.6 | 4.9 | 4.8 |
| 26 | 7.5 | 7.8 | 5.1 | 34 | 10 | 38 | 12 | 12 | 6.7 | 5.6 | 4.9 | 4.7 |
| 27 | 7.5 | 7.3 | 5.0 | 25 | 9.5 | 34 | 11 | 11 | 6.6 | 4.7 | 4.5 | 5.0 |
| 28 | 7.4 | 6.9 | 5.2 | 18 | 10 | 30 | 15 | 10 | 6.6 | 5.0 | 4.3 | 6.4 |
| 29 | 7.5 | 6.9 | 5.3 | 13 | --- | 26 | 14 | 9.9 | 6.4 | 6.9 | 4.1 | 11 |
| 30 | 7.6 | 6.9 | 5.3 | 11 | --- | 22 | 13 | 9.6 | 6.6 | 5.4 | 3.9 | 19 |
| 31 | 7.7 | --- | 5.0 | 9.8 | --- | 20 | --- | 9.2 | --- | 4.8 | 3.9 | --- |
| TOTAL | 235.6 | 241.8 | 182.4 | 545.6 | 458.3 | 1216.9 | 447 | 647.7 | 227.6 | 192.4 | 132.8 | 195.1 |
| MEAN | 7.60 | 8.06 | 5.88 | 17.6 | 16.4 | 39.3 | 14.9 | 20.9 | 7.59 | 6.21 | 4.28 | 6.50 |
| MAX | 18 | 11 | 8.4 | 104 | 38 | 143 | 26 | 74 | 9.6 | 8.6 | 5.8 | 19 |
| MIN | 6.3 | 6.9 | 4.9 | 5.0 | 7.9 | 8.7 | 11 | 9.2 | 6.4 | 4.7 | 3.8 | 3.7 |
| CFSM | .22 | .23 | .17 | .50 | .47 | 1.12 | .43 | .60 | .22 | .18 | .12 | .19 |
| IN. | .25 | .26 | .19 | .58 | .49 | 1.29 | .48 | .69 | .24 | .20 | .14 | .21 |

02022500 KERRS CREEK NEAR LEXINGTON, VA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 1999, BY WATER YEAR (WY)

| | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 23.0 | 24.1 | 32.8 | 46.8 | 55.3 | 74.2 | 58.3 | 38.7 | 27.8 | 17.6 | 23.5 | 19.3 |
| MAX | 141 | 209 | 129 | 163 | 150 | 357 | 306 | 159 | 194 | 99.5 | 162 | 188 |
| (WY) | 1938 | 1986 | 1949 | 1937 | 1998 | 1936 | 1987 | 1989 | 1995 | 1972 | 1969 | 1950 |
| MIN | 5.24 | 6.50 | 5.88 | 5.15 | 8.86 | 14.5 | 10.3 | 12.0 | 7.59 | 5.56 | 4.28 | 5.31 |
| (WY) | 1964 | 1966 | 1966 | 1966 | 1931 | 1981 | 1942 | 1956 | 1999 | 1966 | 1999 | 1970 |

SUMMARY STATISTICS FOR 1998 CALENDAR YEAR FOR 1999 WATER YEAR WATER YEARS 1927 - 1999

| | | | |
|--------------------------|---------|--------|-------|
| ANNUAL TOTAL | 18942.8 | 4723.2 | |
| ANNUAL MEAN | 51.9 | 12.9 | 36.7 |
| HIGHEST ANNUAL MEAN | | | 75.5 |
| LOWEST ANNUAL MEAN | | | 12.9 |
| HIGHEST DAILY MEAN | 1060 | Jan 8 | e4840 |
| LOWEST DAILY MEAN | 4.9 | Dec 23 | 3.7 |
| ANNUAL SEVEN-DAY MINIMUM | 5.1 | Dec 21 | 3.9 |
| INSTANTANEOUS PEAK FLOW | | | 254 |
| INSTANTANEOUS PEAK STAGE | | | 4.47 |
| INSTANTANEOUS LOW FLOW | | | 3.6 |
| ANNUAL RUNOFF (CFSM) | 1.48 | | .37 |
| ANNUAL RUNOFF (INCHES) | 20.13 | | 5.02 |
| 10 PERCENT EXCEEDS | 119 | | 24 |
| 50 PERCENT EXCEEDS | 18 | | 7.8 |
| 90 PERCENT EXCEEDS | 6.6 | | 4.6 |

- a From high-water mark in gage house.
- b Also Aug 18-19, 31, and Sep 1, 2, 3, 1999.
- c Result of temporary dam upstream.
- e Estimated.

