

RAPPAHANNOCK RIVER BASIN

01669000 PISCATAWAY CREEK NEAR TAPPAHANNOCK, VA

LOCATION.--Lat 37°52'37", long 76°54'03", Essex County, Hydrologic Unit 02080104, on right bank at upstream side of bridge on State Highway 691, 0.6 mi south of Hensley Fork, 2.3 mi downstream from Sturgeon Swamp, and 4.2 mi southwest of Tappahannock.

DRAINAGE AREA.--28.0 mi².

PERIOD OF RECORD.--July 1951 to current year.

REVISED RECORDS.--WSP 2103: Drainage area. WDR VA-79-1: 1970-76(P), 1978(P).

GAGE.--Water-stage recorder. Datum of gage is 2.50 ft above sea level.

REMARKS.--Records good except those for period with ice effect, Jan. 6, periods of doubtful gage-height record, Feb. 24 and Apr. 7, and period with backwater from beaver dams, Apr. 28 to Sep. 30, which are fair. Maximum discharge, 2,380 ft³/s, from rating curve extended above 1,400 ft³/s. 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 250 ft³/s and maximum (*):

| Date | Time | Discharge (ft ³ /s) | Gage height (ft) | Date | Time | Discharge (ft ³ /s) | Gage height (ft) |
|--------|------|-----------------------------------|---------------------|--|------|-----------------------------------|---------------------|
| Sep 16 | 1730 | *1,240 | *6.19 | No other peak greater than base discharge. | | | |

Minimum discharge, no flow part or all of each day Aug 10-14.

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 | 2.9 | 4.0 | 5.9 | 13 | 13 | 23 | 23 | e9.8 | e1.1 | 16 | .51 | e1.8 |
| 2 | 2.4 | 4.3 | 5.7 | 9.5 | 17 | 21 | 28 | e9.3 | e1.0 | 16 | .44 | e1.5 |
| 3 | 2.5 | 6.8 | 5.6 | 56 | 19 | 18 | 27 | e9.0 | e.80 | 11 | .33 | e1.4 |
| 4 | 2.0 | 9.8 | 5.3 | 71 | 18 | 20 | 25 | e8.5 | e.72 | 7.7 | .29 | e4.2 |
| 5 | 2.6 | 11 | 5.4 | 32 | 18 | 20 | 24 | e8.0 | e.70 | 5.6 | .26 | e9.5 |
| 6 | 2.9 | 9.9 | 5.5 | e21 | 15 | 18 | 22 | e8.8 | e.60 | 4.5 | .18 | e13 |
| 7 | 4.5 | 8.6 | 5.3 | 16 | 14 | 15 | e19 | e8.4 | e.50 | 4.1 | .11 | e12 |
| 8 | 5.2 | 7.4 | 7.0 | 16 | 15 | 13 | 18 | e7.7 | e.43 | 3.7 | .05 | e11 |
| 9 | 5.8 | 6.6 | 33 | 17 | 14 | 13 | 19 | e7.2 | e.37 | 3.6 | e.01 | e9.5 |
| 10 | 6.5 | 6.8 | 35 | 16 | 13 | 15 | 27 | e6.7 | e.34 | 3.3 | .01 | e8.4 |
| 11 | 5.6 | 8.1 | 19 | 14 | 12 | 18 | 26 | e6.2 | e.30 | 3.1 | .00 | e7.8 |
| 12 | 3.8 | 7.9 | 13 | 13 | 13 | 18 | 23 | e5.9 | .26 | 2.8 | .00 | e7.4 |
| 13 | 3.3 | 8.5 | 33 | 12 | 18 | 17 | 20 | e5.3 | .38 | 4.9 | .00 | e7.0 |
| 14 | 3.2 | 8.2 | 48 | 12 | 19 | 24 | 18 | e6.0 | .99 | 7.3 | .18 | e6.6 |
| 15 | 2.5 | 8.7 | 26 | 20 | 16 | 107 | 16 | e5.5 | 1.1 | 7.4 | 12 | 16 |
| 16 | 2.2 | 8.5 | 17 | 27 | 13 | 75 | 18 | e4.8 | 1.1 | 4.7 | 14 | 739 |
| 17 | 2.1 | 8.4 | 13 | 21 | 12 | 40 | 15 | e5.0 | 1.1 | 3.4 | e8.0 | 397 |
| 18 | 2.0 | 8.0 | 10 | 20 | 17 | 32 | 12 | e4.4 | 1.1 | 2.6 | e4.5 | 68 |
| 19 | 1.9 | 11 | 9.4 | 20 | 24 | 27 | 11 | e3.9 | .85 | 2.2 | e2.5 | 35 |
| 20 | 1.8 | 9.1 | 8.9 | 18 | 20 | 24 | 11 | e3.4 | 1.1 | 1.9 | e10 | 25 |
| 21 | 1.6 | 9.2 | 8.4 | 16 | 16 | 30 | 12 | e2.5 | 1.3 | 1.6 | e16 | 26 |
| 22 | 2.1 | 9.9 | 9.7 | 14 | 13 | 82 | 13 | e2.2 | 1.3 | 1.6 | e9.0 | 39 |
| 23 | 2.2 | 8.1 | 8.7 | 13 | 12 | 53 | 13 | e4.0 | 1.1 | 1.5 | e6.0 | 26 |
| 24 | 2.1 | 7.2 | 13 | 37 | e11 | 36 | 14 | e3.5 | .77 | 1.3 | e4.2 | 21 |
| 25 | 2.2 | 6.6 | 15 | 60 | 12 | 33 | 13 | e3.2 | .69 | 1.3 | e3.2 | 18 |
| 26 | 2.0 | 8.1 | 13 | 36 | 14 | 27 | 12 | e2.8 | .47 | 1.0 | e3.0 | 17 |
| 27 | 2.3 | 8.7 | 12 | 26 | 14 | 25 | 11 | e2.5 | .49 | .88 | e6.1 | 19 |
| 28 | 2.3 | 8.9 | 13 | 22 | 17 | 29 | e11 | e2.0 | .44 | .81 | e5.0 | 21 |
| 29 | 2.5 | 7.6 | 16 | 18 | --- | 28 | e10 | e1.7 | 1.3 | .73 | e4.4 | 23 |
| 30 | 2.8 | 6.4 | 15 | 16 | --- | 25 | e9.9 | e1.5 | 11 | .65 | e3.4 | 27 |
| 31 | 3.7 | --- | 13 | 15 | --- | 23 | --- | e1.3 | --- | .58 | e2.5 | --- |
| TOTAL | 91.5 | 242.3 | 447.8 | 717.5 | 429 | 949 | 520.9 | 161.0 | 33.70 | 127.75 | 116.17 | 1618.1 |
| MEAN | 2.95 | 8.08 | 14.4 | 23.1 | 15.3 | 30.6 | 17.4 | 5.19 | 1.12 | 4.12 | 3.75 | 53.9 |
| MAX | 6.5 | 11 | 48 | 71 | 24 | 107 | 28 | 9.8 | 11 | 16 | 16 | 739 |
| MIN | 1.6 | 4.0 | 5.3 | 9.5 | 11 | 13 | 9.9 | 1.3 | .26 | .58 | .00 | 1.4 |
| CFSM | .11 | .29 | .52 | .83 | .55 | 1.09 | .62 | .19 | .04 | .15 | .13 | 1.93 |
| IN. | .12 | .32 | .59 | .95 | .57 | 1.26 | .69 | .21 | .04 | .17 | .15 | 2.15 |

01669000 PISCATAWAY CREEK NEAR TAPPAHANNOCK, VA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1999, BY WATER YEAR (WY)

| | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 19.0 | 26.9 | 30.7 | 37.9 | 44.8 | 53.3 | 48.7 | 36.8 | 24.9 | 17.7 | 17.1 | 16.0 |
| MAX | 63.4 | 74.1 | 74.7 | 88.4 | 124 | 118 | 109 | 87.0 | 111 | 105 | 88.0 | 70.4 |
| (WY) | 1980 | 1980 | 1997 | 1978 | 1998 | 1994 | 1958 | 1972 | 1975 | 1955 | 1979 | |
| MIN | 1.30 | 6.30 | 9.20 | 7.93 | 14.0 | 13.5 | 13.4 | 5.19 | 1.12 | 2.01 | 1.00 | .28 |
| (WY) | 1955 | 1955 | 1966 | 1955 | 1955 | 1981 | 1985 | 1999 | 1999 | 1954 | 1954 | 1954 |

SUMMARY STATISTICS FOR 1998 CALENDAR YEAR FOR 1999 WATER YEAR WATER YEARS 1952 - 1999

| | | | | | | | | | | | | |
|--------------------------|--|---------|-------|---------|--------|--|------|---------|-------|------|---------|------|
| ANNUAL TOTAL | | 14903.8 | | 5454.72 | | | | | | | | |
| ANNUAL MEAN | | 40.8 | | 14.9 | | | | | | 31.1 | | |
| HIGHEST ANNUAL MEAN | | | | | | | | | | 56.8 | | 1958 |
| LOWEST ANNUAL MEAN | | | | | | | | | | 12.1 | | 1954 |
| HIGHEST DAILY MEAN | | | | 631 | Feb 5 | | 739 | Sep 16 | 1080 | | Aug 13 | 1955 |
| LOWEST DAILY MEAN | | | | 1.6 | Oct 21 | | .00 | aAug 11 | .00 | | aAug 11 | 1999 |
| ANNUAL SEVEN-DAY MINIMUM | | | | 1.9 | Sep 15 | | .03 | Aug 7 | .03 | | Aug 7 | 1999 |
| INSTANTANEOUS PEAK FLOW | | | | | | | 1240 | Sep 16 | 2380 | | Aug 20 | 1969 |
| INSTANTANEOUS PEAK STAGE | | | | | | | 6.19 | Sep 16 | b7.52 | | Aug 20 | 1969 |
| INSTANTANEOUS LOW FLOW | | | | | | | .00 | (c) | .00 | | (c) | |
| ANNUAL RUNOFF (CFSM) | | | 1.46 | | | | .53 | | 1.11 | | | |
| ANNUAL RUNOFF (INCHES) | | | 19.80 | | | | 7.25 | | 15.08 | | | |
| 10 PERCENT EXCEEDS | | | 101 | | | | 26 | | 63 | | | |
| 50 PERCENT EXCEEDS | | | 16 | | | | 8.8 | | 22 | | | |
| 90 PERCENT EXCEEDS | | | 2.5 | | | | .95 | | 5.0 | | | |

- a Also Aug 12, 13, 1999.
- b From high-water mark in well.
- c No flow part or all of each day Aug 10-14, 1999.
- e Estimated.

