

SCHUYLKILL RIVER BASIN

01470779 TULPEHOCKEN CREEK NEAR BERNVILLE, PA

LOCATION.--Lat 40°24'48", long 76°10'19", Berks County, Hydrologic Unit, 02040203, on left bank 30 ft downstream from Mill Road bridge at Kricks Mill, 0.4 mi upstream from Mill Creek, and 3.5 mi west of Bernville.

DRAINAGE AREA.--66.5 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1974 to current year.

REVISED RECORDS.--WDR PA-96-1: 1975-83(P), 1988(P), 1990(P), 1993-94(P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 311.26 ft above sea level (Pennsylvania Department of Transportation datum).

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite and landline telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1972 reached a stage of about 9.5 ft, from information by local resident, discharge about 6,000 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 950 ft³/s and maximum (*):

| Date | Time | Discharge ft ³ /s | Gage Height (ft) | Date | Time | Discharge ft ³ /s | Gage Height (ft) |
|---------|------|---------------------------------|---------------------|--|------|---------------------------------|---------------------|
| Dec. 17 | 1630 | *2,030 | *6.40 | No other peak greater than base discharge. | | | |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 | 57 | 48 | 48 | e57 | 103 | 79 | 181 | 96 | 72 | 48 | 36 | 37 |
| 2 | 56 | 50 | 47 | e56 | 109 | 78 | 167 | 86 | 79 | 53 | 35 | 30 |
| 3 | 57 | 42 | 45 | e55 | 99 | 75 | 154 | 84 | 72 | 47 | 34 | 28 |
| 4 | 53 | 38 | 44 | 55 | 91 | 70 | 151 | 82 | 69 | 52 | 34 | 30 |
| 5 | 76 | 35 | 43 | 55 | 93 | 87 | 141 | 80 | 60 | 50 | 33 | 31 |
| 6 | 55 | 32 | 43 | 54 | 89 | 83 | 154 | 77 | 57 | 46 | 34 | 28 |
| 7 | 52 | 40 | 41 | 53 | 88 | 83 | 148 | 75 | 56 | 44 | 38 | 28 |
| 8 | 50 | 45 | 41 | 52 | 87 | 91 | 153 | 74 | 55 | 44 | 38 | 28 |
| 9 | 49 | 47 | 41 | 52 | 86 | 95 | 154 | 74 | 54 | 48 | 38 | 27 |
| 10 | 50 | 70 | 40 | 50 | 162 | 93 | 143 | 72 | 53 | 47 | 53 | 29 |
| 11 | 49 | 51 | 40 | 50 | 118 | 91 | 142 | 69 | 53 | 53 | 77 | 28 |
| 12 | 48 | 47 | 41 | 51 | 106 | 90 | 158 | 69 | 59 | 67 | 54 | 27 |
| 13 | 47 | 44 | 44 | 46 | 101 | 152 | 142 | 68 | 70 | 70 | 48 | 27 |
| 14 | 46 | 46 | 96 | 49 | 99 | 131 | 129 | 66 | 53 | 69 | 57 | 29 |
| 15 | 49 | 41 | 81 | 51 | 103 | 112 | 125 | 65 | 52 | 69 | 51 | 26 |
| 16 | 48 | 36 | 79 | 52 | 101 | 110 | 175 | 65 | 55 | 67 | 49 | 23 |
| 17 | 53 | 38 | 798 | 53 | 112 | 132 | 155 | 63 | 78 | 66 | 48 | 22 |
| 18 | 50 | 37 | 185 | 52 | 97 | 128 | 185 | 62 | 59 | 69 | 50 | 23 |
| 19 | 45 | 33 | 135 | 76 | 93 | 120 | 159 | 61 | 55 | 66 | 58 | 25 |
| 20 | 43 | 29 | 115 | 95 | 92 | 113 | 150 | 59 | 53 | 65 | 58 | 24 |
| 21 | 48 | 39 | 99 | 75 | 89 | 130 | 160 | 70 | 52 | 63 | 38 | 25 |
| 22 | 42 | 41 | 92 | 68 | 85 | 149 | 155 | 96 | 58 | 63 | 36 | 22 |
| 23 | 37 | 41 | 85 | e65 | 83 | 113 | 142 | 79 | 68 | 62 | 35 | 22 |
| 24 | 42 | 42 | 79 | e63 | 81 | 107 | 122 | 64 | 59 | 57 | 37 | 28 |
| 25 | 47 | 43 | e75 | 62 | 87 | 100 | 114 | 60 | 53 | 52 | 34 | 142 |
| 26 | 51 | 58 | e71 | 61 | 95 | 96 | 109 | 76 | 51 | 79 | 32 | 50 |
| 27 | 50 | 50 | 68 | 60 | 85 | 92 | 115 | 85 | 49 | 59 | 32 | 40 |
| 28 | 48 | 47 | e65 | 59 | 82 | 96 | 117 | 96 | 47 | 57 | 33 | 35 |
| 29 | 49 | 47 | e63 | 57 | --- | 95 | 111 | 76 | 42 | 55 | 29 | 31 |
| 30 | 48 | 54 | 62 | 85 | --- | 324 | 108 | 76 | 41 | 55 | 30 | 32 |
| 31 | 47 | --- | 60 | 101 | --- | 215 | --- | 72 | --- | 46 | 30 | --- |
| TOTAL | 1542 | 1311 | 2866 | 1870 | 2716 | 3530 | 4319 | 2297 | 1734 | 1788 | 1289 | 977 |
| MEAN | 49.7 | 43.7 | 92.5 | 60.3 | 97.0 | 114 | 144 | 74.1 | 57.8 | 57.7 | 41.6 | 32.6 |
| MAX | 76 | 70 | 798 | 101 | 162 | 324 | 185 | 96 | 79 | 79 | 77 | 142 |
| MIN | 37 | 29 | 40 | 46 | 81 | 70 | 108 | 59 | 41 | 44 | 29 | 22 |
| CFSM | .75 | .66 | 1.39 | .91 | 1.46 | 1.71 | 2.16 | 1.11 | .87 | .87 | .63 | .49 |
| IN. | .86 | .73 | 1.60 | 1.05 | 1.52 | 1.97 | 2.42 | 1.28 | .97 | 1.00 | .72 | .55 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2001, BY WATER YEAR (WY)

| | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 80.9 | 94.2 | 114 | 130 | 130 | 167 | 148 | 113 | 99.6 | 85.9 | 66.0 | 67.2 |
| MAX | 250 | 181 | 288 | 385 | 264 | 468 | 367 | 277 | 208 | 216 | 129 | 181 |
| (WY) | 1977 | 1997 | 1997 | 1979 | 1979 | 1994 | 1993 | 1989 | 1982 | 1984 | 1976 | 1975 |
| MIN | 35.5 | 38.7 | 40.7 | 33.6 | 48.6 | 67.5 | 58.8 | 59.5 | 41.4 | 32.1 | 30.4 | 29.7 |
| (WY) | 1998 | 1982 | 1999 | 1981 | 1992 | 1981 | 1985 | 1999 | 1999 | 1999 | 1999 | 1991 |

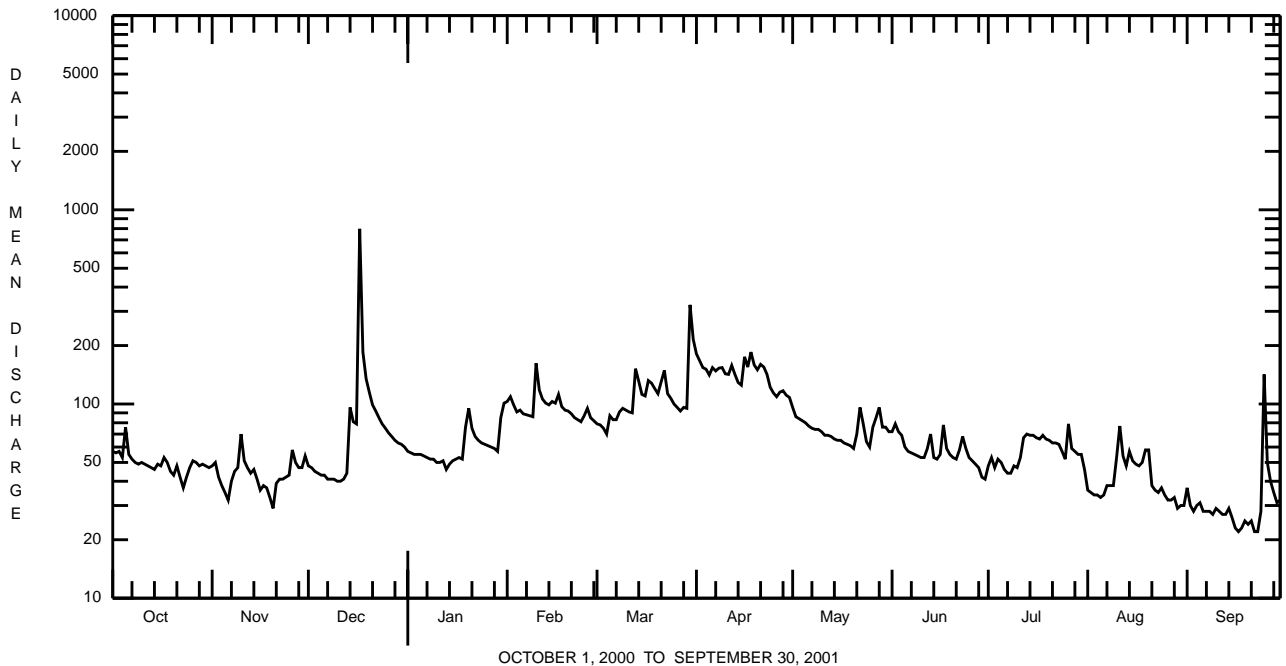
e Estimated.

SCHUYLKILL RIVER BASIN

01470779 TULPEHOCKEN CREEK NEAR BERNVILLE, PA--Continued

| SUMMARY STATISTICS | FOR 2000 CALENDAR YEAR | | FOR 2001 WATER YEAR | | WATER YEARS 1975 - 2001 | |
|--------------------------|------------------------|--------|---------------------|-----------------|-------------------------|-------------|
| ANNUAL TOTAL | 38058 | | 26239 | | | |
| ANNUAL MEAN | 104 | | 71.9 | | 107 | |
| HIGHEST ANNUAL MEAN | | | | | 164 | 1994 |
| LOWEST ANNUAL MEAN | | | | | 55.7 | 1981 |
| HIGHEST DAILY MEAN | 2080 | Jun 26 | 798 | Dec 17 | 2140 | Jan 26 1978 |
| LOWEST DAILY MEAN | 29 | Nov 20 | 22 | Sep 17,22,23 | 19 | Aug 4 1999 |
| ANNUAL SEVEN-DAY MINIMUM | 36 | Nov 15 | 23 | Sep 17 | 22 | Jul 30 1999 |
| MAXIMUM PEAK FLOW | | | a2030 | Dec 17 | a7140 | Jan 24 1979 |
| MAXIMUM PEAK STAGE | | | 6.40 | Dec 17 | 10.16 | Jan 24 1979 |
| INSTANTANEOUS LOW FLOW | | | 22 | Sep 17,18,22,23 | 19 | Aug 4 1999 |
| ANNUAL RUNOFF (CFSM) | 1.56 | | 1.08 | | 1.61 | |
| ANNUAL RUNOFF (INCHES) | 21.29 | | 14.68 | | 21.84 | |
| 10 PERCENT EXCEEDS | 163 | | 123 | | 180 | |
| 50 PERCENT EXCEEDS | 74 | | 58 | | 84 | |
| 90 PERCENT EXCEEDS | 47 | | 34 | | 43 | |

a From rating curve extended above 740 ft³/s on basis of contracted-opening measurement at 3,900 ft³/s, gage height 8.01 ft.



SCHUYLKILL RIVER BASIN

01470779 TULPEHOCKEN CREEK NEAR BERNVILLE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1978 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Water years 1978 to current year.

INSTRUMENTATION.--Temperature recorder since October 1977. Temperature probe interfaced with a data collection platform since 1986 water year.

REMARKS.--Water temperature records rated fair. Fish community data for this site are presented on pages 429-431.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 28.5°C, July 6, 1999; minimum, 0.0°C, many days during winters.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 26.5°C, Aug. 8, 9; minimum, 0.0°C, several days during winter.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|---------|------|------|----------|------|------|----------|-----|------|---------|-----|------|
| | OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | | |
| 1 | 13.5 | 12.0 | 13.0 | 10.5 | 8.5 | 9.5 | 6.0 | 4.5 | 5.5 | 1.5 | .5 | 1.0 |
| 2 | 15.0 | 13.0 | 14.0 | 11.0 | 9.0 | 9.5 | 4.5 | 2.5 | 4.0 | 2.0 | .5 | 1.5 |
| 3 | 16.5 | 14.0 | 15.5 | 11.0 | 9.0 | 10.0 | 3.0 | 1.0 | 2.0 | 1.0 | .0 | .5 |
| 4 | 17.5 | 16.0 | 16.5 | 12.0 | 10.0 | 10.5 | 2.5 | .5 | 1.5 | 2.0 | .5 | 1.5 |
| 5 | 17.5 | 15.5 | 16.5 | 11.0 | 8.5 | 10.0 | 3.0 | 1.0 | 2.0 | 1.5 | .5 | 1.0 |
| 6 | 16.0 | 15.0 | 15.5 | 9.5 | 7.5 | 8.5 | 2.5 | 1.0 | 1.5 | 3.0 | 1.0 | 2.0 |
| 7 | 15.0 | 12.5 | 14.0 | 9.0 | 7.0 | 8.0 | 2.0 | 1.0 | 1.5 | 3.5 | 2.0 | 2.5 |
| 8 | 12.5 | 10.0 | 11.5 | 10.5 | 8.0 | 9.5 | 2.5 | 1.5 | 2.0 | 3.5 | 2.5 | 3.0 |
| 9 | 10.0 | 9.0 | 9.5 | 12.0 | 10.0 | 11.0 | 3.5 | 2.0 | 2.5 | 3.5 | 2.0 | 3.0 |
| 10 | 10.0 | 9.0 | 9.5 | 12.5 | 12.0 | 12.0 | 2.5 | 1.5 | 2.0 | 2.0 | 1.0 | 1.5 |
| 11 | 12.0 | 9.5 | 10.5 | 12.0 | 10.5 | 11.0 | 4.0 | 2.5 | 3.5 | 2.5 | 1.0 | 1.5 |
| 12 | 13.0 | 10.5 | 11.5 | 11.0 | 9.5 | 10.0 | 5.5 | 3.5 | 4.5 | 3.5 | 1.5 | 2.0 |
| 13 | 13.5 | 11.5 | 12.0 | 11.0 | 9.5 | 10.0 | 3.5 | 1.5 | 2.5 | 3.0 | 1.5 | 2.0 |
| 14 | 14.5 | 12.0 | 13.0 | 10.5 | 9.0 | 10.0 | 5.0 | 2.0 | 3.5 | 2.5 | 1.5 | 2.0 |
| 15 | 15.0 | 13.0 | 14.0 | 9.0 | 6.5 | 8.0 | 5.5 | 4.5 | 5.0 | 4.5 | 2.5 | 3.5 |
| 16 | 15.0 | 14.0 | 14.5 | 7.0 | 5.5 | 6.5 | 5.5 | 4.5 | 5.0 | 5.0 | 4.0 | 4.5 |
| 17 | 14.5 | 13.5 | 14.0 | 8.0 | 6.0 | 6.5 | 10.5 | 5.0 | 8.0 | 4.5 | 4.0 | 4.0 |
| 18 | 14.0 | 13.5 | 13.5 | 6.5 | 5.0 | 6.0 | 7.0 | 4.0 | 5.0 | 4.0 | 3.5 | 4.0 |
| 19 | 14.5 | 12.5 | 13.5 | 5.5 | 3.5 | 4.5 | 4.5 | 4.0 | 4.0 | 4.5 | 3.5 | 4.0 |
| 20 | 13.5 | 11.5 | 12.5 | 4.5 | 2.5 | 3.5 | 4.0 | 2.5 | 3.0 | 4.5 | 3.0 | 4.0 |
| 21 | 14.0 | 11.5 | 12.5 | 4.5 | 2.5 | 3.0 | 3.0 | 1.5 | 2.0 | 3.0 | 1.5 | 2.0 |
| 22 | 14.5 | 12.0 | 13.0 | 3.0 | 1.5 | 2.5 | 4.0 | 2.0 | 3.5 | 2.0 | .5 | 1.0 |
| 23 | 13.0 | 11.0 | 11.5 | 2.5 | .5 | 1.5 | 2.0 | .0 | 1.0 | 1.5 | .0 | 1.0 |
| 24 | 12.5 | 10.5 | 11.5 | 3.0 | .5 | 1.5 | 2.0 | 1.0 | 1.5 | 2.5 | .5 | 1.5 |
| 25 | 14.5 | 12.0 | 13.0 | 3.0 | 1.5 | 2.0 | 2.0 | .0 | 1.0 | 3.5 | 2.0 | 2.5 |
| 26 | 14.5 | 13.0 | 13.5 | 6.0 | 2.5 | 4.5 | .5 | .0 | .0 | 2.5 | 1.5 | 2.0 |
| 27 | 14.5 | 12.5 | 13.0 | 8.0 | 6.0 | 7.0 | 1.5 | .5 | 1.0 | 3.5 | 2.5 | 3.0 |
| 28 | 14.0 | 11.5 | 13.0 | 8.5 | 7.0 | 7.5 | 2.0 | 1.0 | 1.5 | 3.5 | 2.5 | 3.0 |
| 29 | 11.5 | 9.0 | 10.5 | 7.5 | 6.5 | 7.0 | 1.5 | .0 | .5 | 3.0 | 1.5 | 2.5 |
| 30 | 10.5 | 8.5 | 9.5 | 7.0 | 6.0 | 7.0 | 2.0 | 1.0 | 1.5 | 4.5 | 3.0 | 3.5 |
| 31 | 10.5 | 8.5 | 9.5 | --- | --- | --- | 1.5 | 1.0 | 1.0 | 5.0 | 4.0 | 4.5 |
| MONTH | 17.5 | 8.5 | 12.7 | 12.5 | .5 | 7.3 | 10.5 | .0 | 2.7 | 5.0 | .0 | 2.4 |

SCHUYLKILL RIVER BASIN

01470779 TULPEHOCKEN CREEK NEAR BERNVILLE, PA--Continued

CROSS-SECTION ANALYSES, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

| DATE | TIME | DIS- CHARGE, IN CUBIC FEET PER SECOND (00060) | SAMPLE LOC- ATION, CROSS SECTION (FT FM R BK) (72103) | TEMPER- ATURE WATER (DEG C) (00010) |
|----------|------|--|--|---|
| NOV 2000 | | | | |
| 15... | 1242 | 41 | 58 | -- |
| 15... | 1243 | -- | 53 | 8.1 |
| 15... | 1244 | -- | 48 | 8.1 |
| 15... | 1245 | -- | 43 | 8.1 |
| 15... | 1246 | -- | 38 | 8.1 |
| 15... | 1247 | -- | 33 | 8.1 |
| 15... | 1248 | -- | 28 | 8.1 |
| 15... | 1249 | -- | 23 | 8.1 |
| 15... | 1250 | -- | 18 | 8.2 |
| 15... | 1251 | -- | 13 | 8.2 |
| 15... | 1252 | -- | 8 | 8.2 |
| 15... | 1253 | -- | 3 | 8.2 |
| 15... | 1254 | -- | 0 | -- |
| MAY 2001 | | | | |
| 02... | 1607 | 86 | 0 | -- |
| 02... | 1608 | -- | 6 | 18.5 |
| 02... | 1609 | -- | 11 | 18.4 |
| 02... | 1610 | -- | 16 | 18.4 |
| 02... | 1611 | -- | 21 | 18.3 |
| 02... | 1612 | -- | 26 | 18.3 |
| 02... | 1613 | -- | 31 | 18.3 |
| 02... | 1614 | -- | 36 | 18.3 |
| 02... | 1615 | -- | 41 | 18.3 |
| 02... | 1616 | -- | 46 | 18.3 |
| 02... | 1617 | -- | 51 | 18.3 |
| 02... | 1618 | -- | 56 | 18.3 |
| 02... | 1619 | -- | 61 | 18.3 |
| 02... | 1620 | -- | 66 | 18.3 |
| 02... | 1621 | -- | 71 | 18.6 |
| SEP | | | | |
| 06... | 1154 | 28 | 0 | -- |
| 06... | 1155 | -- | 5 | 18.1 |
| 06... | 1156 | -- | 10 | 18.2 |
| 06... | 1157 | -- | 15 | 18.2 |
| 06... | 1158 | -- | 20 | 18.2 |
| 06... | 1159 | -- | 25 | 18.2 |
| 06... | 1200 | -- | 30 | 18.2 |
| 06... | 1201 | -- | 35 | 18.2 |
| 06... | 1202 | -- | 40 | 18.3 |
| 06... | 1203 | -- | 45 | 18.3 |
| 06... | 1204 | -- | 50 | 18.3 |
| 06... | 1205 | -- | 55 | 18.4 |
| 06... | 1206 | -- | 60 | 18.4 |
| 06... | 1207 | -- | 63 | -- |