

CHESTER CREEK BASIN

01477000 CHESTER CREEK NEAR CHESTER, PA

LOCATION.--Lat 39°52'08", long 75°24'31", Delaware County, Hydrologic Unit 02040202, on right bank 30 ft downstream from bridge on Dutton Mill Road, and 3.0 mi northwest of Chester.

DRAINAGE AREA.--61.1 mi².

PERIOD OF RECORD.--August 1931 to current year. Monthly discharges only for some periods, published in WSP 1302.

REVISED RECORDS.--WDR PA-72-1: 1971.

GAGE.--Water-stage recorder. Datum of gage is 23.41 ft above Penn Central Railroad datum. Prior to June 27, 1966, water-stage recorder at site 50 ft upstream, and June 28, 1966, to Oct. 4, 1967, nonrecording gage 30 ft upstream and at gage, all at same datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversion about 2.6 mi upstream into Ridley Creek basin (see station 01476480 Ridley Creek at Media) by Philadelphia Suburban Water Company. Diversion for the year was equivalent to a mean daily discharge of 3.2 ft³/s. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,400 ft³/s and maximum (*):

| Date | Time | Discharge ft ³ /s | Gage Height (ft) | Date | Time | Discharge ft ³ /s | Gage Height (ft) |
|---------|------|---------------------------------|---------------------|---------|------|---------------------------------|---------------------|
| Dec. 17 | 1100 | *2,910 | *8.99 | Mar. 30 | 0530 | 1,710 | 6.89 |

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 | 49 | 43 | 59 | e50 | e97 | 100 | e192 | 75 | 80 | 42 | 27 | 27 |
| 2 | 49 | 43 | 54 | e50 | 82 | 97 | e155 | 72 | 209 | 62 | 25 | 22 |
| 3 | 48 | 43 | 51 | e49 | 72 | 93 | e134 | 70 | 89 | 41 | 23 | 20 |
| 4 | 69 | 41 | 50 | e50 | 66 | 109 | e117 | 68 | 71 | 41 | 22 | 44 |
| 5 | 312 | 41 | 49 | e54 | 381 | e168 | e104 | 65 | 66 | 48 | 28 | 60 |
| 6 | 75 | 42 | 48 | e51 | 246 | e117 | 101 | 66 | 64 | 45 | 24 | 28 |
| 7 | 56 | 43 | 48 | e53 | 175 | e124 | 101 | 64 | 63 | 40 | 21 | 23 |
| 8 | 49 | 42 | 48 | 58 | 138 | e151 | 94 | 63 | 60 | 40 | 20 | 21 |
| 9 | 48 | 43 | 46 | 61 | 127 | 126 | 100 | 63 | 57 | 40 | 18 | 21 |
| 10 | 49 | 110 | 47 | 54 | 193 | 113 | 145 | 63 | 53 | 39 | 32 | 21 |
| 11 | 48 | 57 | 49 | 51 | 110 | 102 | 139 | 60 | 53 | 55 | 52 | 21 |
| 12 | 47 | 48 | 50 | 53 | 94 | 98 | 169 | 57 | 84 | 37 | 75 | 21 |
| 13 | 45 | 45 | 48 | 50 | 99 | 299 | 119 | 55 | 58 | 35 | 81 | 21 |
| 14 | 43 | 65 | 249 | 50 | 94 | 145 | 105 | 53 | 54 | 33 | 38 | 40 |
| 15 | 43 | 63 | 96 | 76 | 95 | e130 | 100 | 54 | 53 | 32 | 32 | 32 |
| 16 | 43 | 47 | 74 | 69 | 103 | e161 | 177 | 53 | 167 | 32 | 29 | 25 |
| 17 | 43 | 46 | 1470 | 60 | 203 | 207 | 122 | 54 | 258 | 32 | 27 | 23 |
| 18 | 56 | 44 | 236 | 56 | 108 | 111 | 119 | 56 | 78 | 32 | 27 | 23 |
| 19 | 55 | 44 | 107 | 297 | 96 | 93 | 104 | 57 | 62 | 35 | 27 | 23 |
| 20 | 46 | 44 | 90 | 340 | 93 | 87 | 96 | 54 | 56 | 30 | 37 | 29 |
| 21 | 43 | 46 | 74 | 168 | 92 | 386 | 96 | 135 | 56 | 28 | 30 | 111 |
| 22 | 44 | 43 | e69 | 105 | 86 | 306 | 95 | 206 | 57 | 26 | 27 | 32 |
| 23 | 43 | 42 | e65 | e89 | 95 | 138 | 92 | 128 | 66 | 26 | 29 | 26 |
| 24 | 44 | 41 | e61 | e80 | 91 | 115 | 90 | 74 | 55 | 28 | 31 | 25 |
| 25 | 44 | 41 | e57 | 76 | 119 | 107 | 85 | 65 | 50 | 27 | 26 | 101 |
| 26 | 44 | 343 | e54 | 71 | 195 | 103 | 84 | 407 | 48 | 28 | 24 | 38 |
| 27 | 44 | 121 | e52 | 69 | 120 | 98 | 83 | 370 | 46 | 31 | 23 | 29 |
| 28 | 43 | 70 | e51 | 67 | 107 | 94 | 81 | 126 | 44 | 26 | 26 | 27 |
| 29 | 43 | 60 | e51 | 67 | --- | 97 | 77 | 87 | 43 | 27 | 23 | 26 |
| 30 | 43 | 76 | e53 | 334 | --- | 965 | 77 | 75 | 41 | 32 | 23 | 25 |
| 31 | 43 | --- | e51 | e180 | --- | e260 | --- | 66 | --- | 28 | 51 | --- |
| TOTAL | 1751 | 1877 | 3607 | 2938 | 3577 | 5300 | 3353 | 2961 | 2241 | 1098 | 978 | 985 |
| MEAN | 56.5 | 62.6 | 116 | 94.8 | 128 | 171 | 112 | 95.5 | 74.7 | 35.4 | 31.5 | 32.8 |
| MAX | 312 | 343 | 1470 | 340 | 381 | 965 | 192 | 407 | 258 | 62 | 81 | 111 |
| MIN | 43 | 41 | 46 | 49 | 66 | 87 | 77 | 53 | 41 | 26 | 18 | 20 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2001, BY WATER YEAR (WY)

| | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 56.1 | 77.5 | 90.7 | 105 | 115 | 143 | 128 | 101 | 77.1 | 68.5 | 61.9 | 67.6 |
| MAX | 234 | 233 | 328 | 326 | 326 | 627 | 413 | 224 | 176 | 254 | 217 | 543 |
| (WY) | 1980 | 1951 | 1997 | 1979 | 1979 | 1994 | 1980 | 1983 | 1982 | 1975 | 1955 | 1971 |
| MIN | 13.7 | 18.2 | 24.3 | 23.4 | 41.4 | 53.1 | 41.9 | 34.8 | 28.3 | 17.4 | 13.7 | 10.4 |
| (WY) | 1942 | 1932 | 1932 | 1981 | 1932 | 1981 | 1963 | 1942 | 1966 | 1932 | 1966 | 1932 |

e Estimated.

CHESTER CREEK BASIN

01477000 CHESTER CREEK NEAR CHESTER, PA--Continued

| SUMMARY STATISTICS | FOR 2000 CALENDAR YEAR | | FOR 2001 WATER YEAR | | WATER YEARS 1932 - 2001 | |
|--------------------------|------------------------|-----------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 39342 | | 30666 | | 90.8 | |
| ANNUAL MEAN | 107 | | 84.0 | | 168 | |
| HIGHEST ANNUAL MEAN | | | | | 1979 | |
| LOWEST ANNUAL MEAN | | | | | 39.3 | |
| HIGHEST DAILY MEAN | 2500 | Mar 22 | 1470 | Dec 17 | 6510 | Sep 13 1971 |
| LOWEST DAILY MEAN | 33 | Sep 7, 10 | 18 | Aug 9 | 6.5 | Sep 25 1941 |
| ANNUAL SEVEN-DAY MINIMUM | 34 | Sep 6 | 21 | Sep 7 | 8.3 | Sep 9 1932 |
| MAXIMUM PEAK FLOW | | | a2910 | Dec 17 | a21000 | Sep 13 1971 |
| MAXIMUM PEAK STAGE | | | 8.99 | Dec 17 | b24.59 | Sep 13 1971 |
| INSTANTANEOUS LOW FLOW | | | 16 | Sep 4 | .30 | Aug 7 1934 |
| 10 PERCENT EXCEEDS | 189 | | 145 | | 155 | |
| 50 PERCENT EXCEEDS | 62 | | 56 | | 60 | |
| 90 PERCENT EXCEEDS | 42 | | 27 | | 28 | |

- a From rating curve extended above 2,400 ft³/s on basis of contracted-opening measurement at 9,400 ft³/s, at gage height 13.57 ft, and slope-area measurement of peak flow.
- b From floodmark.

